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THE NEW YORK
JOURNAL OF MEDICINE,

AND THE

COLLATERAL SCIENCES.

EDITED BY

CHARLES A. LEE, M.D.

VOL. V.

NEW YORK:
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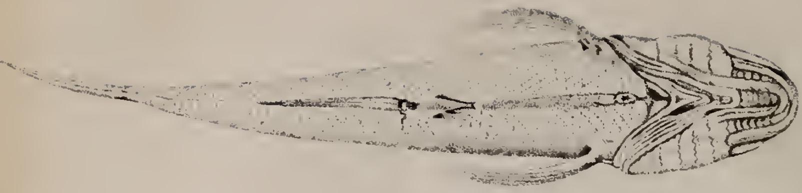
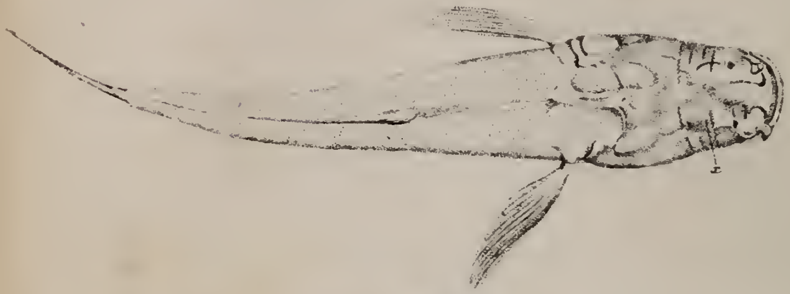
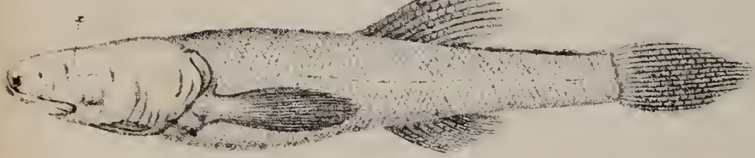
1845.







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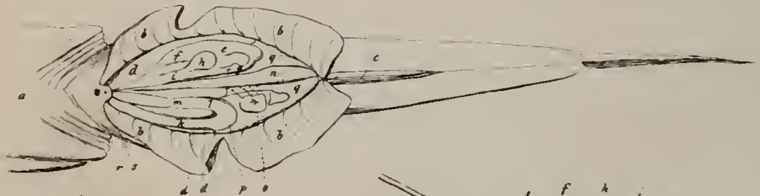

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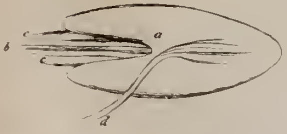

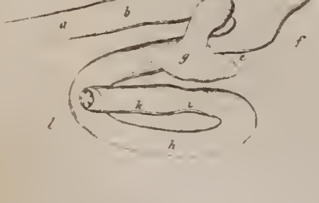

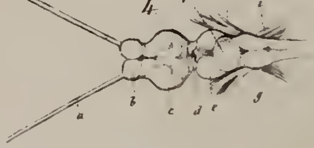

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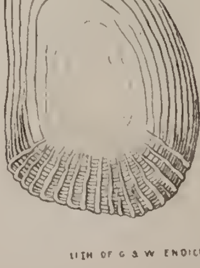

LITH OF G & W ENDICOTT N Y

TO THE PATRONS OF THE JOURNAL.

The present number commences the third year, and the fifth volume, of the New York Journal of Medicine and the Collateral Sciences, established by the late Samuel Forry, M.D. It has constantly advanced in the confidence and support of the profession, till it is now placed on a permanent foundation, with the prospect of a long, and, we trust, prosperous career before it. Circulating as it does, through every section of the Union, and taken by the entire Medical Staff of the United States Army, it furnishes a desirable medium of communication with the profession, and we would hope, not an unprofitable source of information to its readers.

The Editor has reluctantly consented to undertake the editorial supervision of its pages; and in doing so, it is proper to state, briefly, the principles on which it will hereafter be conducted.

1. It will, as heretofore, be open to all well-written communications under a responsible name, which are calculated to interest and instruct the medical reader; articles, however, of a practical character will always be preferred.

2. The Journal will be independent; and while it will not advocate the interests of any party, sect, or school, it will treat all with liberality, fairness and candor.

3. Its pages will never (knowingly) be sullied with personalities, nor with the effusions of private spleen and malice—criminations and recriminations can have no admittance; but erroneous statements will, whenever made known, be cheerfully corrected.

4. Books for review will be placed in the hands of those who have paid particular attention to the subject discussed; and the articles will always bear the initials of the writers.

5. Quacks and quackery of every description, whether in or out of the profession, will have exact justice dealt out to them; in other words, they will receive no quarter.

6. A prominent place will be given, as heretofore, to the proceedings of our various medical and surgical associations, not only on account of their intrinsic merit, but as tending to the removal of unfounded prejudices.

With the above outline of our future plans, we enter on a new year, with full assurance of the continued approbation and patronage of the profession. Engaging in it from no pecuniary motives, but with a sincere desire to do what we can to advance the interests and promote the welfare of our common profession, we shall cheerfully labor, and make all needed sacrifices to this end; and we look for our reward in the friendly co-operation and kind approval of our medical brethren. We feel it to be a sacred duty, and we shall therefore exert ourselves to the utmost, to elevate the standard of professional attainment and character, and to promote the feeling of union and good-fellowship. We rejoice to know that a spirit of kindness, charity, and brotherhood, is daily growing stronger among us, and that although the pulse of medical emulation beats high and strong, it is controlled and regulated by sentiments of honor, conscientiousness, and good-will. Such sentiments it will always be our aim to cultivate, to cherish, and to extend.

CHARLES A. LEE, M.D.

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Art. XIX.—Outlines of the Institutes of Medicine, founded on the Philosophy of the Human Economy in Health and Disease. In Three Parts. By Joseph A. Gallup, M.D., &c. 2d Ed. Revised. 2 vols. New York: 1845. 8vo, ... ib.

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The following Medical Journals have been received in Exchange:

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The Provincial Medical Journal.
The London Medical Gazette.
The American Journal of the Medical Sciences.
The Illinois Medical and Surgical Journal.
The New Orleans Medical Journal.
The Boston Medical and Surgical Journal.
The Western Journal of Medicine and Surgery.
The Medical News.
The Medical Examiner.
The Bulletin of Medical Science.
The Southern Medical and Surgical Journal.
The Montreal Medical Gazette
Silliman's Journal of the Arts and Sciences.
The American Journal and Library of Dental Science.
The American Journal of Insanity.
The British and American Journal of Medicine and Physical Science.
The Buffalo Medical Journal.

TO READERS AND CORRESPONDENTS.

We have received communications since our last No. from Dr. James Fountain, of West Chester; Dr. Samuel Boyd, of the Sailor's Hospital, Staten Island; Dr. Alfred B. Dayton, Middletown Point, N J.; Dr. H. M. Gray, of New York; Dr. Jacob P. Stryker, of New Town, Long Island; J. H. Griscom, M.D., of New York; Dr. N. S. Davis, of Binghampton, N. Y.; Prof. James Webster, of Rochester, Prof. Shipman, and several others.

☞ The excellent article in the present No. on "Diseases of the Cæcum," was, by accident, not credited to its able author, Edson Carr, M. D., of Canandaigua, in its proper place.

⁂ The indulgence of the reader is requested for the large space appropriated to the Original Department, in the present No. The value of the articles, we trust, may, however, make up for their length. Hereafter we shall aim to give a greater variety to our pages, and more copious selections from foreign journals.

We have to acknowledge the receipt of the following works since our last publication:—

A Practical Treatise on the Diseases Peculiar to Women. By Samuel Ashwell, M.D., Member of the Royal College of Physicians, London; and Obstetric Physician and Lecturer to Guy's Hospital. With Notes by Paul B. Goddard, M.D., &c. Philadelphia: Lea & Blanchard 1845.

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Principles and Illustrations of Morbid Anatomy; adapted to the Elements of M. Andral, and to the Cyclopœdia of Practical Medicine, being a complete Series of Colored Lithographic Drawings, from originals by the Author, with Descriptions and Summary Allusions to Cases, Symptoms, Treatment, &c., designed to constitute a complete Appendix to works on the Practice of Physic, and to facilitate the Study of Morbid Anatomy in connection with Symptoms. By J. Hope, M.D., &c. Edited by L. M. Lawson, M.D. Cincinnati: 1844.

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Outlines of the Institutes of Medicine; founded on the Philosophy of the Human Economy in Health and Disease, in 3 parts By J. A. Gallup, M. D., &c. 2d Edition. Revised. 2 vols., 8vo. New York: 1845. (From the Publishers.)

Thirty-third Circular of Castleton Medical College: being a Catalogue of the Officers of the College and Class of the Spring Session of 1845, and announcement of the Autumnal Session of 1845. (From Dr. Sweetzer.)

——— Catalogue of the Officers and Students of Bowdoin College and the Medical School of Maine. 1845. (From Dr. Sweetzer.)

An Encyclopœdia of Domestic Economy; containing such subjects as are most immediately connected with House-keeping. (From the Publishers, Harper & Brothers. 1845.)

A Dictionary of Practical Medicine: containing General Pathology, the Nature and Treatment of Diseases, Morbid Structures, &c. Edited, with additions, by Charles A. Lee, M. D. Parts VII., VIII., IX. and X. (From the Publishers, Harper & Brothers. May and June, 1845.)

Annual Circular and Catalogue of the Officers and Students of the Laporte University. Session of 1844–'5. (From Prof. Shipman.)

Popular Lectures on Science and Art; Delivered in the principal Cities and Towns of the United States. By Dionysius Lardner, LL.D., &c. New York: Greely & McElrath. 1845. Parts I., II. and III. 8vo.

The Botanical Text-Book, for Colleges, Schools, and Private Students. Comprising, Part I. An Introduction to Structural and Physiological Botany. Part II. The Principles of Systematic Botany; with an account of the Chief Natural Families of the Vegetable Kingdom, and notices of the Principal Useful Plants. *Second Edition*, with 1000 engravings on steel. By Asa Gray, M.D., Fisher Professor of Natural History in Harvard University. (From the Publishers.)

Plato against the Atheists, or the Tenth Book of the Dialogue on Laws; accompanied with Critical Notes, and followed by Extended Dissertations on some of the main points of the Platonic Philosophy and Theology, especially as compared with the Holy Scriptures. By Taylor Lewis, LL.D. (From the publishers, Harper & Brothers. 8vo., pp. 378. 1845.)

Annual Report of the City Inspector of the City of New York. For the year 1844. (From the City Inspector.)

Transactions of the New York State Medical Society. Vol. VI. Part II. (From Prof. M. Paine.)

Address delivered to the Graduating Class of the Medical College of Georgia, March 9th, 1845. By Wm. T. Brantley. Augusta: 1845.

The Last Hundred Years. A Lecture delivered in the Hall of the Western University of Pennsylvania, on Tuesday Evening, February 4, 1845, &c. By George Upfold, M.D., D.D., Pres. of the Board of Trustees, &c. Pittsburgh: 1845. (From the author.)

Etherology; or, the Philosophy of Mesmerism and Phrenology, including a new Philosophy of Sleep and Consciousness, with a review of the Pretensions of Neurology and Phreno-Magnetism. By J. Stanley Grimes, Counsellor at Law, &c. New York: 1845. 12mo., pp. 350. (From the publishers.)

On Education in Medicine; or, a Critical Review of the Leading Medical Doctrines; an Inaugural Thesis, presented at the New York University on the 1st March, 1845. By Charles J. Hempel, M.D. New York: 1845. Pamphlet. (From Dr. Mott.)

Report of the Select Committee of the House of Representatives of the State of Pennsylvania relative to the use of Mercury in the Practice of Medicine. Harrisburgh: 1845. 8vo., pp. 5. (From the Committee.)

The Principles of the Chrono-Thermal System of Medicine, with Fallacies of the Faculty, in a Series of Lectures, &c. By Samuel Dickson, M.D., &c. First Am. Ed. With an Introduction and Notes, by Wm. Turner, M.D., late Health Commissioner of the City and County of New York. 8vo., pp. 227. (From the Publisher.)

Lectures on Subjects connected with Clinical Medicine, comprising Diseases of the Heart. By P. M. Latham, M.D., &c. 2 vols., 12mo. Lond.: 1845. (From the Author.)

Seven Lectures on Somnambulism. Translated from the German of Dr. Arnold Wienkolh, with a Preface, Introduction, Notes and an Appendix. By J. C. Colquhoun, Esq., Advocate. Edinburgh: 1845.

An Elementary Treatise on Auscultation and Percussion, or the application of Acoustics to the Diagnosis of Diseases, with a Synoptical Table. By A. Raciborski, M.D., &c. Translated by Minturn Post, M.D. N. Y.: 1839. 8vo. (From the Publishers.)

THE NEW YORK

JOURNAL OF MEDICINE.

FOR JULY, 1845.

PART FIRST.

Original Communications.

Art. I.—*Cases of Thoracic Disease in which the Diagnosis was attended with unusual difficulties.* By John A. Swett, M.D., Physician to the New York Hospital; Lecturer on the Diseases of the Chest.

The diagnosis of the diseases of the chest, in ordinary cases, has undoubtedly attained a positiveness and certainty that belong to no other class of internal diseases, if we except those of the eye. Still cases do occur in which, notwithstanding the most careful study, great doubt may exist, or even great errors be committed. The absence of prominent symptoms, or the unusual progress of a case, will sometimes cause us to hesitate; the presence of prominent symptoms, and especially of physical signs, *but which are misinterpreted*, will also sometimes lead us to form a positive diagnosis which a post-mortem examination shall entirely refute. It is this latter point that the following cases are well calculated to illustrate. They are cases of false diagnosis with positive symptoms; they are interesting to the pathologist as exhibiting rare forms of disease; they may prove useful in practice by putting others, as they certainly have done me, on their guard as to the possibility of deception when everything appeared clear and certain; and finally by pointing out the way in which similar mistakes may in many instances be avoided.

The four cases that form the subject of this report have occurred during the past year in hospital and private practice. The first case, although not primarily of thoracic origin, yet being almost immediately attended by marked pulmonary symptoms as well as actual disease in the chest, may with propriety be introduced here.

Case I.—*Abscess of the Liver, simulating Empyema.*—William Wiseman, *æt.* 26 years, a native of England, seaman, entered the New York Hospital, July 30th, 1844.

The patient stated that about two years ago, while residing in Honduras, he was attacked with intermittent fever, which continued six months, and that thirteen months elapsed before he had completely recovered his health; also, that about last Christmas, while in perfect health, he was seized suddenly, being at work, with severe pain in the right side, which continued, without any other very prominent symptoms, for four or five weeks, and for which he used blisters. During the past spring or summer, he left Honduras and came to this city. At the time of his present attack, he was in excellent health.

Four days before admission to the hospital, he was seized with pain in the right side, cough with trifling expectoration, and fever. When first examined, the pain was found to be acute and constant, increased by a full inspiration, and situated just above the lower edge of the false ribs, in the right hypochondrium; the respiration was accelerated, about thirty a minute, and laborious; the cough dry, or attended with a trifling frothy mucous expectoration; the pulse frequent, 126 a minute, and small, but of good strength, the skin warm and disposed to perspiration. The tongue was covered with a thin white coat, and the bowels freely opened. On examination of the chest, no physical signs were discovered. The case was regarded as one of incipient pleurisy of the right side, in which effusion had not occurred. The general condition of the patient not seeming to require venesection, he was cupped freely, and repeatedly, over the lower portion of the right side of the chest, purged, ordered Dover's powder, and low diet.

August 2d. The patient is considerably relieved, the pain in the side has diminished. Tongue covered with a thin white coat; skin warm and soft; pulse quick, full, and strong; disposition to perspiration during the night. Dulness on percussion over the lateral portion of the right side, with egophony, indicating slight effusion into the right pleural cavity. Vesicat. lat. dext. thorac.

The blister produced marked but temporary relief, the pulse fell to 104, became soft, the skin also became cool. The pain in the right side occupied a space about the size of a dollar, and was of a sharp gnawing character, increased by coughing, by full inspiration, by movement in bed, attacking him like a cramp, also by pressure upwards under the false ribs. The face, however, became pale and anxious, the respiration did not improve, thirty-six, and laborious; the bowels were rather costive.

August 14th. The pulse has risen to 120, soft and feeble; skin rather warm, cough trifling: still complains of pain about false ribs on the right side on full inspiration; respiration forty. Dulness on percussion exists on the right side of the chest, as high as the nipple, and the respiratory murmur is absent. The patient complains of irregular chills, also of night sweats; skin rather warmer than natural. The blisters have been continued, and much relief has been experienced from full doses of morphine.

September 18th. During the past month the patient has been gradually failing, the countenance growing more pale, and the emaciation more marked; the hectic symptoms have also continued with more or less regularity. Morphine, blisters, and the aromatic sulph. acid were administered, with an improved diet. On the 10th Sept. he was ordered the treatment recommended by Dr. Hope for chronic pleurisy, viz.: Mass Hydrar. grs. iii, P. Digitalis, P. Scillæ, āā grs. i., ter in die, with nutritious diet and porter. The physical examination of the chest discovered no important changes from those noticed August 14th. To-day on careful examination, the following conditions were found to exist. No marked dilatation of the right side, but lower angle of the right scapula more elevated than the left, more prominent, and moving less during respiration. Posteriorly, the dulness on percussion extends up as high as the spine of the scapula, laterally quite up into the axilla, anteriorly to within an inch of the clavicle. At the base of the lung no respiratory murmur is heard; about the lower angle of the scapula it begins to be heard feebly, improving above; in the axilla, it is heard, but is feeble, and mixed with an obscure mucous rattle; below, laterally, it is absent. Anteriorly, under the clavicle, it is clear and vesicular, diminishing in distinctness downward, and about the nipple masked by a mucous rattle (egophony, which had been noted several times during the past month, is not mentioned in the note of to-day). On the left side of the chest, the respiratory murmur is everywhere loud and vesicular. The respiration is laborious, oppressed, forty; there is constant pain in the lower part of the right side of the chest, increased by full inspiration. The cough is violent and paroxysmal, with an expectoration of opake mucus floating in serum. The appetite has failed during the past week and food causes nausea and vomiting; the bowels are disposed to be loose, the urine is natural. The skin is warm, with increase of heat at night, and sweating, but no chills at present; the pulse is 124. The countenance is very pale, and the patient is losing flesh and strength rapidly.

Pil. hyd. grs. iii, pulv. opii. gr. i, also, tinc. digit. gutt. xx, e. sp. ether nitros. ter in die. Vesicat. ad lat. dext. Beef tea, &c.

Oct. 6th. Six days ago, Oct. 1st, the lower and lateral portion of the right side was found evidently dilated, the dilatation extending, but in a less degree, posteriorly. The intercostal spaces, particularly between the sixth and seventh ribs, were bulging; and over this portion there was marked tenderness on pressure. Over the seat of dilatation, there was absolute dulness on percussion and complete absence of the respiratory murmur. The heart was pushed to the left, so that the apex struck one and a half inches outside the nipple; the edge of the liver could be felt two inches below the false ribs. To-day, with the bulging of the intercostal spaces, there is a feeling of obscure fluctuation. The legs have become œdematous. The gums have for a few days been slightly touched with mercury. Anorexia, and the disposition to vomit food about two hours after taking it, continue.

The constant progression of the symptoms, the hectic fever, the anorexia with vomiting, and the now marked evidences of the accumulation of purulent matter, as indicated also by the physical signs, induced me to attempt to assist the powers of nature by making an external opening, and in doing so, I did not doubt for a moment that I was dealing with a case of empyema. A deep incision was made laterally between the seventh and eighth ribs, which appeared to be the chief point of dilatation; the dissection was continued until I had penetrated below the posterior surface of the rib. Finding no matter, I passed in an exploring needle to the depth of about two inches: it passed evidently into a solid substance. The wound was then closed and the patient kept quiet.

Oct. 9th. The disposition to looseness in the bowels which has continued for some time, with occasional griping, has now terminated in a confirmed diarrhœa; six stools a day, watery but of good color; abdomen slightly tender and tympanitic ; skin warm, pulse ninety-two ; tongue moist, and covered by a dirty white coat.

Oct. 17th. The right side has been examined from time to time since the preceding operation, and yesterday a feeling of fluctuation between the tenth and eleventh ribs, and in a line with the axilla, was so distinct that, with the consent of Dr. Cheesman, who saw the patient with me, I was induced to make a new attempt to evacuate the matter. This time I was successful. A trocar passed in between the tenth and eleventh ribs, in a line with the axilla, evacuated at least two quarts of pus. The purulent fluid was not of as healthy an appearance as could be wished ; it was offensive, partly tinged brown from admixture of blood, and stringy. As the matter flowed it was noticed that no air entered the canula during inspiration. The patient was much relieved by the discharge of matter ; he complains to-day of but little pain ; the respiration is twenty-two, the skin cool and soft, the pulse one hundred and twelve, soft, and of moderate strength. The edge of liver which before the operation descended two inches below the ribs, can now be felt just at their margin. Quinine, porter, wine, nutritious diet, with anodynes, were continued.

Oct. 18th. The patient is evidently more feeble to-day. On examining the wound, the canula was found to have slipped out, but the dressings were drenched with a thin greenish-black offensive fluid, instead of the tolerably healthy pus that had escaped the previous day. The lips of the incision also looked blackish and flabby. On passing in a probe the rib was found bare. The opening into the abscess was enlarged a little from before backwards, and about a tablespoonful of florid blood flowed from the wound. A compress and bandage were applied, and stimulants continued. In the evening the patient was found to be fast sinking—he was very restless. The dressings were slightly tinged with blood : there was no escape of matter. He died at 11, P. M.

Post-mortem Examination sixteen hours after death.—Emaciation : no external marks of decomposition ; slight œdema of the feet ; no tympanitis. Lower half of the right side of the chest much more prominent than the corresponding portion of the left side.

Head not examined.

On exposing the cavities of the chest by sawing through the ribs, the right lobe of the liver was found to be enlarged upwards, extending as high as the lower edge of the fourth rib at its junction with the cartilage, and diminishing the cavity of this side of the chest at least one-half—which contained, moreover, two and a half pints of high colored serum, but without flocculi of lymph. The right lung was much compressed and reduced in size, especially the middle and lower lobes. It was carried forwards and inwards, and adhered to the diaphragm and to the anterior wall of the chest by tolerably firm adhesions. The upper lobe reduced to about one-half its usual size still crepitated freely ; its apex presented the first stage of pneumonia, its base adhered to the diaphragm by adhesions as firm as those of the lower lobes ; its upper portion was united to the anterior and superior walls of the chest by more recent adhesions. The left lung contained at its summit an old cheesy tubercle, encysted ; a trifling quantity of bloody serum was noticed in the cavity of the left pleura. The bronchial mucous membrane was pale, but rather opake and thickened. The heart was healthy and pushed a little to the left.

The enlargement of the liver was confined to the right lobe and to the superior portion, the free edge, thin and pale, projecting only an inch below the ribs. The peritoneum covering the upper and right two-thirds of this lobe adhered to the diaphragm by false membranes of the same firmness as those which united the right lung to this partition. An immense abscess occupied the superior and right portion of this lobe. It contained, 1st, about a pint of dark grumous clotted blood: 2nd, a considerable quantity of the stringy pus that had passed through the canula two days before: it adhered firmly to the walls of the abscess which were formed by a thick and firm false membrane. The substance of the liver immediately around the abscess was of a dark and bluish tint, the natural granular texture being lost, but it was neither injected nor softened. In one portion, however, and in the immediate neighborhood of the abscess, the liver was of a dark red color, moist and friable to the depth of about an inch. The rest of the organ was pale and rather soft; its granular structure was preserved. The gall-bladder contained a small quantity of watery transparent yellowish fluid.

The tenth rib was bare for three inches, commencing at its cartilage, and beginning to grow rough from caries both internally and externally —the ninth rib was also bare, but to a less extent and not carious. On looking at the parietes of the thorax inside the ribs affected, a patch involving all the tissues, as large as the palm of the hand, and in the centre of which existed the aperture made by the trochar, was in a state of gangrene. The same gangrenous condition was found external to the ribs, and to the same extent, involving the muscles and cellular tissue, but not the skin. The spleen was much enlarged, the kidneys were pale and healthy. The mucous membrane of the stomach was pale and much softened, with large brownish veins ramifying beneath it. The mucous membrane of the jejunum was natural, and tinged with healthy bile, that of the ileum was rather thickened, the thickness increasing in the neighborhood of the ileo-cœcal valve, and rather softened, but without injection. The sub-mucous and muscular tissues were also thickened. The mucous membrane of the cœcum was of a slate color, somewhat softened and thickened, and studded with ulcers, some of considerable size, but without inflamed or elevated edges: the subjacent coats, particularly the muscular, were much thickened. This slaty color did not extend much into the colon, neither did the ulcers, but the coats of the large intestines, throughout their whole extent, were thickened, and the mucous membrane friable, although these conditions were less marked, the nearer we approached to the anus. The mesenteric glands were enlarged but pale, the mesenteric veins congested. Considerable effusion of serum was found in the cavity of the peritoneum.

The possibility that an abscess of the liver might be the true disease in the above case, was suggested during its progress, and abandoned after a careful review of the rational and physical signs. With the exception that the patient had resided in a warm climate for several years before his attack, a circumstance probably worthy of more attention than it received, there was really no good reason for deciding in favor of a very rare form of disease with us, and against one of our most frequent forms of attack, pleurisy, to which both in its early, as well as late progress, it bore so close a resemblance. It was ushered in with symptoms of febrile reaction, with acute pain in the side increased by a full inspiration, dry cough and dyspnœa. On a careful review of these symptoms, it might be thought that the pain was unusually low down, about the edges of the false ribs; indeed, I well remember that the resident physician, Dr. Elliott, remarked before I had examined the case, that he supposed it to be an inflammation of the serous coat of the liver. It might also recur to those who remember the early condition of the case, that the dyspnœa was too intense, and the impression on the constitution too powerful for a case of pleurisy unattended by any physical signs: yet the marked dyspnœa should, I think, rather confirm the supposition that the disease was thoracic, and the absence of marked physical signs until the sixth day, although unusual in pleurisy, should by no means lead us to believe that it did not exist. The progress of the case, the development of dulness on percussion and absence of respiration over a considerable portion of the affected side, and above all the existence of egophony as proved by repeated observation, the gradual dilatation of the side, with bulging and fluctuation of the intercostal spaces, the displacement of the heart, and finally the setting in of a well marked hectic, all pointed directly to one disease, empyema. Again, the entire absence of jaundice, and of any derangement of the biliary secretion, the position and condition of the free edge of the liver, which, although lower down than natural, was yet without tumefaction, were all circumstances calculated to draw attention from the liver, and fix it upon the pleura. To leave nothing unconsidered that might have corrected the diagnosis, it might be thought that the pointing was unusually low for empyema; it certainly was so, yet I can remember two cases where the pointing was, I think, equally low down, the one, a boy about six years old, who was operated upon by Dr. J. Kearney Rodgers, the other, a lad a little older, in whom the opening was spontaneous. The truth is, that secondary pleurisy, with effusion, no doubt occurred at a very early period of the attack, as is proved I think, 1st, by the post-mortem fact that the false membranes uniting the lungs to the diaphragm were equally ancient with those which united the liver to this partition, and 2d, by the early development of egophony which existed too distinctly, and was heard by too many persons to admit of any doubt.

The evidences of chronic intestinal inflammation, of which no history was given during life, as well as of recent inflammation as indicated during life by the existence of diarrhœa, and after death by ulceration of the mucous membrane of the cœcum, are also points worthy of attention.

Finally, I am willing to admit that the clot of blood found in the abscess after death, was probably caused by the attempt to enlarge the opening of the trochar the day before death. The condition of the wound seeming to forbid the further use of such a source of irritation as the canula, it was thought advisable to enlarge it a little. This hemorrhage probably hastened the time of death, but it is satisfactory to believe that the same result would inevitably and speedily have followed had not this accident occurred.

CASE II.—*Carcinoma of the Posterior Mediastinum, simulating Empyema.*—Mr. H. a gentleman æt. 45 years, of rather delicate constitution, had been subject to a trifling cough for many years, especially on rising in the morning. About two years ago, he began to notice slight dyspnœa after unusual exertion, and to complain of wandering pains in both sides of the chest, which were relieved by stimulating liniments; these symptoms existed without any marked alteration in his general health. In January, 1844, he had an attack of severe pain in the left side which continued several days. February 26th, 1844, he consulted his physician Dr. A. Du Bois, for a pain in the back, which was regarded as lumbago. May 26, he asked advice again for the wandering pain about his chest, which affected both sides and especially the region about the nipples; at this time the dyspnœa had rather increased. In June and the early part of July, he complained of strong pulsation with burning heat in the epigastrium, eructations, and a sense of uneasiness in the stomach when empty; the bowels were costive. During this time, however, he attended regularly to his business. On the 9th of July, while in his store and seeing two of his men hoisting an empty barrel, he playfully seized the rope with one hand and gave a slight pull, when he felt something snap in the anterior portion of the left side of the chest; complained of acute pain in the same region, and partially fainted. When seen by Dr. Du Bois, a short time after the accident, his respiration was hurried, his countenance anxious, and he complained of intense pain on the left side, about the third rib in front. On placing the hand on this region a distinct crepitation was felt over an extent of several inches, indicating an effusion of air into the sub-cutaneous cellular tissue. Leeches and warm fomentations gave him decided relief.

A day or two after this accident I saw the patient for the first time. The effused air was then nearly or quite absorbed, and he complained but little of pain in the chest; there was, however, considerable oppression of the respiration. On examination of the chest, the left side was found evidently dilated, intercostal spaces as well as ribs, and generally dull on percussion, with feeble respiration; the opinion was formed that effusion of fluid existed in the left pleural cavity. The pulse was slow, only 65 in a minute, and there was no fever; the patient was rather pale and feeble, but complained principally of the dyspnœa. At this time, it was supposed that a chronic pleurisy had been slowly developed, and that tubercles very likely existed with it. It was thought not unlikely that the subcutaneous effusion of air was connected with the rupture of a tubercle, the lung having previously become adherent to the walls of the chest in its superior and anterior portion. The idea of an effusion of fluid into the chest being the sole cause of the physical signs was confirmed by watching the progress of the case. After a time egophony was distinctly detected about the lower angle of the scapula, and extending in front to the nipple, and the heart was observed to be pushed over to the right side. A change in the position of the patient made no difference in the dulness on percussion. He continued to linger from this time, although able to attend to his business with more or less regularity, until early in December, when I examined him again. At that time the evidences of effusion had rather diminished; the respiration had become more distinct, and the percussion more clear under the left clavicle. He was free from fever, his pulse was 80, and he had no night sweats. The treatment had consisted principally of blisters, diuretics, and careful diet. Soon after this he passed into the hands of other practitioners, and among other things tried the homœopathic treatment. Still he gradually declined, and finally returned to his original physician. I saw him again on the 27th of February, a few days before his death. At that time he was confined mostly to his bed, was pale, emaciated, and disposed to lie only on the affected side. His pulse had become gradually accelerated to 100, and was feeble; there was also a slight disposition to night sweats, but without heat of skin. The cough was moderate and attended with trifling mucous expectoration. The patient complained of little or no pain in the chest, but of a good deal of dyspnœa; respiration about 40 a minute. There never had been the least evidence of hemoptysis. The tongue and throat were aphthous, the bowels were costive, the urine moderate in quantity with some brick dust sediment.

A careful examination of the chest was made at this time, and the following phenomena were noticed. The respiration was chiefly diaphragmatic; the ribs moving but little, especially those on the left side. The whole left side was much dilated, especially laterally, and anteriorly about the third rib; the intercostal spaces were also dilated. For two or three weeks the intercostal space between the second and third ribs had been observed to bulge during expiration, although during my examination I did not notice it. The percussion of the left side was universally very dull, especially laterally, and anteriorly about and above the nipple. The respiratory murmur could be heard at the summit of the lung, under the clavicle and above the spine of the scapula; posteriorly at the root of the lung and for a considerable space, the respiration was strongly bronchial; over the rest of the lung no respiration whatever was heard, but at the base of the lung a distinct creaking sound like that produced by the friction of false membranes was heard during inspiration and expiration, and had existed there permanently for a considerable time. There was no rattle or rhonchus in any portion of the lung; an imperfect egophony was noticed in the lateral portion where the percussion was the most dull, and the respiratory murmur entirely absent. On the right side, the heart was felt beating far to the right of the sternum, and a slight crepitating rattle existed about the mamma extending under the arm; in other respects, this lung appeared perfectly healthy.

The evidences of effusion into the chest seemed so decided, that I examined the dilated intercostal spaces carefully, in the hope of finding a fluctuating point. Nothing of the kind was discovered, although much tension, as if from strong internal pressure, was noticed. The idea of tapping the chest occurred very forcibly to my mind. On the next day, 28th, the patient was much worse; he was suffering from orthopnœa, although the respiration was not more accelerated than the day before, about 40. He was evidently sinking, and had had several attacks of faintness during the morning; his pulse was 108 and feeble, his skin cool. The crepitation in the right lung was more distinct, and heard only during inspiration, but without corresponding dulness on percussion. The existence of an intercurrent pneumonia was suspected. A blister to the right side and the decoc. Senegæ were ordered, with wine. The patient continued to sink during the day with increased oppression of the respiration, and died at about 11 P. M.

Post-mortem Examination 12 hours after death.—Emaciation considerable; slight œdema of the feet. The left side of the thorax was much dilated, especially anteriorly and laterally. On removing the skin and pectoral muscles, the intercostal space between the second and third ribs was so much dilated, so tense, and even bulging, with the feeling of fluctuation, that I called for a bowl, expecting to draw off a large quantity of fluid before removing the sternum in the usual way, but to my great surprise the instrument passed with considerable resistance into a solid mass! After removing the sternum and cartilages with a portion of the ribs on the left side, the whole left cavity of the thorax, the mediastinal spaces, and at least one quarter of the right cavity of the chest, were found occupied by a tumor. Its shape was irregular; on the left side it corresponded somewhat with the walls of the thorax with which it was in contact, while on the right side it projected by its lower and anterior portion, so as to form a distinct process resembling in size and shape an adult kidney. The attachments of the tumor to the walls of the chest were quite limited. At the anterior and superior portion of the left side they were very firm and ancient over a space as large as the palm of the hand; along the spine also, and the posterior portion of the diaphragm, there were a few adhesions, but in the other portions, the hand could be passed freely round the tumor between its investing membrane and the costal pleura. The left pleural cavity contained about half a pint of reddish serum; its serous membrane was opake and thickened, but without any trace of inflammatory action, except the few old adhesions already mentioned. The left lung, reduced by compression and atrophy to at least one-tenth of its natural size, lay upon the upper and posterior portion of the tumor, its apex but little compressed, embracing the top of the tumor and extending forward upon it. With the exception of this small portion at the summit, the lung was much atrophied and reduced to a thin lamina of otherwise healthy tissue, and presented numerous and large bronchial tubes of the natural size still freely admitting air, so that the lung, when divided, seemed made up in a great measure of these tubes. The right lung adhered generally to the chest by old adhesions; it was diminished in size to a perceptible extent by the pressure of the tumor, and in its middle lobe presented the first stage of pneumonia. The heart, small and flabby, was pushed far into the right cavity of the chest by the kidney-like process of the tumor, which had singularly indented the blunt edge of the left ventricle.

The tumor, when carefully examined, appeared to grow from the cellular tissue at the root of the left lung. In its growth, it seemed to have pushed the pleura of the lung before it, appropriating this membrane as its own proper capsule, while it stripped it off from the atrophied lung—thus the tumor, with respect to the pleura, took the place of the lung. This capsule of pleura, like that lining the ribs, was opake and thickened, but smooth and shining.

The tumor weighed 11½ pounds; it measured vertically twelve inches and transversely eight inches; its circumference in each direction was two feet. On being divided, two or more layers of condensed cellular tissue were found under the pleural capsule of the tumor, and the mass was seen to be composed of at least five distinct tumors of different sizes, each invested by its capsule of condensed cellular tissue. The composition of these tumors was not identical. The two largest, composing two-thirds of the whole mass, were of a pale yellowish-white color, marbled with spots of a deeper yellow or reddish tint, firm to the touch, creaking under the scalpel, giving out on being scraped a little viscid and yellowish apple-juice fluid. Its structure, under the microscope, appeared areolar and without fibres, and presented the orifices of large vessels; it also contained considerable fatty matter (*Schirrus*). Two of the remaining tumors were much smaller, but of a much brighter yellow color, soft and flabby, areolar with large cells, lobulated, presenting numerous red points, and in some portions minute whitish granules and yielding by scraping, a more viscid yellow fluid: they contained no fat (*jelly-*

like degeneration). The fifth and remaining portion of the mass, resembling in shape and size an adult kidney, was composed, in fact, of three masses, more or less distinctly separated from each other; it was much firmer and drier than the other portions. It was distinctly fibrous and in portions bony; in other portions the jelly-like matter appeared to be infiltrated among the fibres (*fibrous tumor*).

The liver was small; the left lobe being reduced, as if from compression, to a thin, tongue-like process, but healthy in its structure; the spleen was also very small, but healthy; the stomach was natural; no disease of the lymphatic system was noticed.

The gradual development of the symptoms in the above case, the cough, the dyspnœa, and the pain in the chest, were certainly not those of ordinary pleurisy. Yet cases of essentially chronic pleurisy are sometimes met with which are attended with similar slowly developed symptoms, and particularly in connexion with the tuberculous diathesis. The general aspect of the patient, a pale, delicate, spare man, rather favored the supposition that this diathesis might exist; and this was rendered still more probable by the sudden occurrence of external cellular emphysema, so readily explained by supposing that a softened tubercle in the superficial portion of the lung had communicaed with the cellular tissue after penetrating the adhesions that had been previously formed between the opposite surfaces of the pleura. A careful examination of the summit of the lung, where the respiration was always pure and vesicular, did not, however, tend to confirm this supposition. The existence of effusion into the cavity of the left pleura was never for a moment doubted. The great dulness, the respiration at first feeble then absent, in the inferior portions of the left side of the chest, the displacement of the heart, the existence of egophony, the dilatation of the chest anteriorly and laterally, the sound of friction that was at length developed posteriorly, and finally the supervention of hectic symptoms, were certainly indications of chronic pleurisy. Indeed, the existence of a large accumulation of fluid in the chest seemed to want nothing to confirm it, except the bulging of the intercostal spaces, which finally appeared in so clear a form that I was on the point of recommending that the patient should be tapped. Even after death, when the integuments and muscles had been removed, the feeling of fluctuation even, was so distinct, that my previous opinion seemed to require no further confirmation; yet the instrument passed into a perfectly solid tumor! It is probable, however, that at one period of the disease, before the tumor had acquired its full development, a certain amount of liquid effusion did exist in the chest, and which was gradually absorbed as the growth of the tumor filled the cavity of the pleura. The existence of egophony, which was well marked at one period of the disease, is a proof of this.

The method of distinguishing solid tumors developed in the chest from liquid effusions into the cavity of the pleura, or of the pericardium. The history of the above case has been sufficient to convince me of the great difficulty that must attend the physical diagnosis of similar cases by the *ordinary* methods. By ordinary percussion the dulness is the same, whether the lung is driven from its natural position, and compressed by a solid or a liquid mass; an absence of the respiratory murmur is certain to accompany either condition. It is also equally certain that the displacement of the neighboring organs, especially of the heart, the dilatation of the chest and even the bulging and fluctuation of the intercostal spaces, may occur under both conditions if either the solid or liquid accumulation be considerable. The method of resolving this uncertainty, I think, will be found by resorting to *Auscultatory Percussion*, first used in medical diagnosis by Drs. Cammann and Clark of this city, and published in the New York Journal of Medicine and Surgery for July, 1840. This valuable addition to medical diagnosis consists in the use of a solid stethoscope, which is to be applied over that portion of the chest where dulness by ordinary percussion is found to exist. Then, by applying the ear to the opposite extremity and percussing gently in the neighborhood of the instrument, if the compressing mass is solid, a smart shock will be communicated to the ear; if it be fluid, little or no shock will be communicated. The idea of resorting to this method of diagnosis, in cases like the above, was first suggested to me by Dr. A. C. Post of this city, and I regard it as one of the most valuable hints I have ever received from an intelligent circle of medical friends. The diagnosis between solid and fluid compressing masses may, I think, be ascertained with equal certainty, even when they co-exist and are in juxta-position, and the exact limits of each accurately defined. Thus in a case of empyema of the right side, from which I have recently drawn off, by tapping, two quarts or more of pus, ordinary percussion detected uniform dulness all over the affected side; yet by auscultatory percussion I could readily distinguish the solid liver below from the fluid pus above.

In the case of Wiseman, first stated, in which the right lobe of the liver was enlarged upwards, with co-existing effusion into the chest, I am also inclined to believe that this method of percussion would have marked distinctly the limits of the solid and the fluid, and established at once the diagnosis; for nothing can be more evident than that a liver rising up and filling half the chest is inconsistent with the idea of a simple empyema, the tending of which is to push the liver downwards.

The value of this mode of diagnosis is strengthened by the recollection that the rational signs, as well as the constitutional symptoms, are often of a very equivocal character. We have seen in the case of Wiseman, how much more the rational signs were dependent upon an alteration of the functions of the lungs than of the liver, which was the primary and chief seat of disease; the same remark will apply to the case of Mr. H. In both these cases, the constitutional symptoms, the gradual emaciation and exhaustion, and the final development of hectic fever, were quite as favorable to the idea of empyema as to the diseases from which they actually suffered.

Case III.—*Carcinoma in the mediastinum involving the Great Vessels, simulating Valvular disease of the Heart.*—Jan. 28th, 1844. Wm. Davis, *æt.* 40 years, a native of England, an equestrian, of good natural constitution but of intemperate habits, was first taken ill about six months ago. He was then living in a damp cellar, and exposed to many privations. He was at first seized with oppression in his breathing, with wheezing respiration, pain in the precordial region passing through the chest, slight cough, and with febrile symptoms. These symptoms continued about a week with considerable severity, after which time be became comparatively easy. Since this time, they have continued to return with intervals of ease continuing for several days. He has been unable to lie on his right side since his first attack. He has been bled once, about two months from the commencement of his attack; he has also been purged and blistered. At the time of his admission to the New York Hospital, on the 28th of January, he presented the aspect of a patient suffering from a chronic and severe disease. He appeared very pale and much emaciated, although, by his own account, he lost neither much strength nor flesh. His skin was cool and rather dry, his pulse accelerated, 112, and rather feeble. The existence of a general dropsy was at once noticed. The feet and legs first became œdematous about three weeks ago; the left arm was in the same condition, the œdema extending to the left side of the chest and as low as the nates—the right side of the trunk was also affected, but in a less degree. Examination of the abdomen detected the existence of a considerable effusion into the peritoneal cavity. No tumor could be discovered there, although the right hypochondriac region offered more resistance to pressure than the opposite side, accompanied by a little tenderness. The tongue was pale but without coat, the appetite good, the digestive powers somewhat impaired. The bowels were rather costive, the urine very scanty, of a deep orange tint, turbid, and depositing a sediment resembling in appearance Indian meal.

On examining the chest, the entire left side was dull on percussion; the respiratory murmur was absent inferiorly and laterally, and feeble over the remaining portions of the side; egophony was detected at different points. No alteration in the form of the side existed, or if any it appeared a little contracted; the heart was considerably displaced to the right. These physical signs indicating the existence of serous effusion into the cavity of the left pleura, were confirmed by the marked effusion in other parts of the body. The patient having been previously purged was ordered the ordinary pill of Blue Mass, Squills, and Digitalis as a diuretic; also, a nourishing diet, with wine.

January 29th. To-day the liver could be distinctly felt enlarged and extending as low as the umbilicus: the pulse was also noticed to be irregular last evening: to-day it is regular.

February 3d. Dyspnœa increasing; dropsical symptoms remain the same; bowels freely moved; pulse 110, regular. A loud rasping sound is heard accompanying the impulse of the heart and having its maximum of intensity over the aortic valves, it gradually diminishes towards the apex to the heart, although it can be heard there; along the aorta it gradually changes to a bellows murmur. Ordered gin in the place of wine; continue the diuretics.

February 4th. Has used the gin freely; respiration very much oppressed, although the dropsical effusion in the lower extremities seems to have diminished a little: face pale, with the expression of distress: urine rather increased in quantity; bowels freely moved by pulv. purgans. Pulse irregular. The rasping sound is heard distinctly along the aorta; over the body of the heart it is extremely feeble and indistinct. The gums having become slightly affected, the mercurial pills were omitted and the ordinary diuretic decoction ordered.

February 5th. Slept very little last night from the oppression of the respiration, which is very labored and twenty-eight per minute. The rasping sound over the heart has changed to-day to a sawing sound; it is not heard over the body of the heart and but faintly along the aorta; pulse 120, feeble, regular.

February 7th. Lies asleep with the head low, breathing laboriously, pulse 96. On being awakened is quite sensible and says he feels easier.

February 8th. Some delirium last night, also to-day; thinks that his breathing is easier; tongue dry with a thin brown coat; bowels costive; urine rather scanty, less than two pints every twenty-four hours, high colored, with much mucus and brick dust sediment. The same sawing sound over aortic valves, no thrill. Ordered pulv. purgans.

February 9th. Lies low and on the left side; pulse 90, irregular; anasarca of legs much increased.

February 10th. In the same condition as yesterday; urine increased in quantity and without sediment, a cloud of mucus floating in it. Respiration 20; pulse 92, regular, rather feeble; skin cool.

February 11th. Slight delirium; pulse 88, and not quite so feeble as yesterday, tongue dry; costive; tracheal rattle; the sawing sound continues over the aortic valves. The patient died the next day.

Post-mortem examination 7 hours after death.—Body much emaciated. Anasarca of both lower extremities, of the left upper extremity and of the left side of the trunk. On opening the chest, the cavity of the left pleura was found to contain about three quarts of bloody serum mixed with a few flocculi of coagulable lymph. The pleura was much thickened, opaque and thinly coated with lymph. The lung pressed upward, occupied about one-third of the cavity of the pleura, and adhered to the walls of the chest both anteriorly and posteriorly with great firmness. A mass of carcinoma, partly schirrous, partly encephaloid, granular, of a dirty white color with yellowish specks of irregular shape scattered through it, exhibiting here and there the rudiments of vessels and yielding, when gently scraped, a viscid yellowish-white fluid, occupied the anterior mediastinum from the origin of the great vessels to the top of the sternum, and involving these vessels in its mass. It also penetrated into the posterior mediastinum, involving the trachea and the œsophagus. Masses of the same cancerous deposit of considerable size occupied also the substance of the lung. Some of the large pulmonary veins were filled and obliterated by it, and in those portions of the lung least affected, numerous small whitish tubercles were discovered, which appeared to be the cancerous matter in its earliest stage. The substance of the lung itself, in the neighborhood of the cancerous masses, appeared quite healthy, although somewhat compressed by the effusion in the pleural cavity, and by the thick and almost cartilaginous false membranes that covered it. The right lung was quite healthy, except a few spots of pulmonary apoplexy near the free edge of the lower lobe. The bronchi appeared somewhat inflamed; the bronchial glands were much enlarged and some of them quite changed into carcinoma.

The pericardium contained about twelve ounces of bloody serum; its surfaces were not adherent, but covered in every part by rough false membranes which were most abundant near the origin of the great vessels and near the apex. The heart itself appeared slightly enlarged, but its cavities as well as those of the great vessels, including the valves, were perfectly healthy. The calibre of the aorta and pulmonary artery, and the cavity of the left auricle, appeared much compressed and diminished by the pressure of the cancerous masses around them.

The stomach was small, and its mucous membrane generally a good deal thickened. The liver appeared healthy, although it descended two or three inches below the ribs; the spleen was also healthy. The pancreas contained several of the cancerous deposits of considerable size, and two or three similar deposits of a small size were found in the tubular portion of one of the kidneys, which also appeared to be firmer and more lobulated than natural. The intestines appeared healthy, also the mesenteric glands. A considerable quantity of yellowish serum existed in the cavity of the peritoneum.

The early symptoms in the above case were not those of disease of the heart, although indicating disease in the chest, the first and most prominent symptom being dyspnœa. Still, the existence at the time of the patient's admission to the Hospital, of a general dropsy commencing in the lower extremities, attended by a permanent sawing sound over the valves of the heart, with more or less irregularity of the pulse, certainly pointed to valvular disease, especially obstruction of the aortic orifice as the most probable cause of the symptoms. Indeed, the external physical obstruction caused by the pressure of a firm and irregular tumor upon the origin of the aorta and pulmonary artery must have operated in precisely the same way upon the functions of the heart, and induced the same physical signs as if the obstruction had been within these vessels, and caused either by tumefaction of the valves, or by ossific deposits. The same tumor pressing also upon the great veins must have added very much to the disturbance of the circulation.

Pericarditis was also found to exist on post-mortem examination, the existence of which was not suspected during life. In reviewing the case, much doubt exists in my own mind as to the time when it was developed. My impression is that it was developed but a short time before death, for whenever the heart was examined its action appeared superficial, and the morbid sawing sound being heard almost entirely over the valves and along the aorta, could with more propriety be referred to the obstruction of the orifices by the pressure of the tumor than to the friction of false membranes. On the other hand it may be remarked, that this rough sound over the valves was not heard during the first days after the admission of the patient, although the obstruction from the tumor must have then been as great as ever; and again, that the tumor developed in part under the base of the heart may have pushed it forward, especially at its base, and thus produced a modification of the usual seat of the friction sound, and allowed its development even with the co-existence of a considerable effusion of liquid.

In this case also, I am inclined to think that auscultatory percussion would have thrown much light upon the diagnosis. For by this method we can distinguish not only fluid from solid masses in the chest, but even the existence of two solids in juxtaposition and not directly united with each other. Thus in the healthy subject we can distinguish by the difference in the shock communicated to the ear, the limits of the heart above and the left lobe of the liver below, although they lie separated from each other only by the diaphragm—so closely connected, indeed, that by ordinary percussion the limits of each cannot be determined. Admitting this fact, it is by no means impossible that the carcinomatous tumor might have been distinguished from the heart not only by a difference in the shock over the two masses, but certainly from the liquid effusion in the chest. Had this been done, its extent, direction and position would have at once removed any suspicion that the heart was the sole source of even the solid enlargement.

The above considerations, tending to show the value of auscultatory percussion in the diagnosis of obscure cases of thoracic disease, must not be regarded as an unnecessary refinement in practice. Indeed, I am sure that those who have made the physical signs of disease the subject of careful study, and yet, like myself, have encountered cases that have baffled all their efforts, will be induced to resort to a method so easy of application and so likely to lead to positive results.

Case IV. *Aneurism of the Ascending Aorta, simulating an Abscess.*—Mr. C——, aged about 35 years, of good constitution and in the habitual enjoyment of good health, except when suffering from rheumatism occasionally, was taken ill without apparent cause about the 1st of January, 1844, a year ago. He found himself affected one morning with a sense of *painful constriction*, passing through from the cartilages of the 2d to 4th ribs, and principally on the right side, back to the shoulder blades. Within a day or two from this time the pain affected also the right shoulder. A physician being called in, regarded it as a mixture of neuralgia and rheumatism; it was relieved by cupping, and cured in about two weeks by the local application of warm stimulants. He then made a visit to New York and returned to New Orleans on the 15th of April last; during this interval he remained *perfectly well.* About a week after his return, however, he was attacked again with pain in the right shoulder, extending up the side of the neck to the back of the head. He also complained occasionally of pain, less severe, in the right arm, and indeed in other parts of the body. The pain in the right shoulder and side of the neck was the most severe, and possessed the characters of neuralgia, being at times of an exceedingly sharp shooting character, and the focus from which the pains in other parts seemed to radiate. The irritation and suffering were so great that the patient lost flesh and strength, and was confined to the house, at least one half of the time for a month or two. Although much enfeebled there was no symptom of local paralysis; no tenderness on pressure over the spine. On the first of June, after blisters, electro-magnetism and warm applications had been used but without any decided relief, he left New Orleans and passed up the Mississippi, suffering greatly during the voyage, and reached Cincinnati in a very weak condition, with his nervous system much shattered by the severity of his sufferings. During his voyage, he for the *first time* became affected with a dry trifling cough. About the middle of June he crossed the mountains from Guyandot to the Blue Sulphur Springs in a private conveyance, walking however, by his own report, about one half the way, with surprising improvement in his strength and relief to his neuralgic symptoms. At this time his breathing was perfectly good, and no pulsation existed in his chest, notwithstanding the mountainous character of the country over which he walked; the dry trifling cough continued. While at the Springs he states that he frequently played nine-pins with his right arm, and rather with relief than otherwise. Indeed during his short residence (only a week or two) at the Springs he improved surprisingly, so that when he left them the neuralgia existed only in a slight degree in the right shoulder and side of the neck. He arrived in New York about the 1st of July, and soon began to grow worse, the pains increasing in severity. At this time he called upon Dr. Harriott, who regarded his case as neuralgia and treated it accordingly. Finding himself no better he went into the country, but now found that the exercise and pure air which had before benefited him so much were decidedly injurious, aggravating his cough and other symptoms. He returned to the city and began to employ himself actively in the purchasing of goods. He *now*, *for the first time,* began to notice pulsation and oppression in the chest on exercise, especially on going up stairs—the pulsation existing in the upper portion of the chest, and on the right side, without his being able to locate it exactly. By the middle of September his breathing had become decidedly asthmatic, as also the cough, the neuralgic pains continuing. To relieve his asthma, he was placed by Dr. Harriott on an inclined plane with the head low; this somewhat relieved the breathing; but created, as he states, such a "commotion" in his chest that he could not endure it for any length of time. A few days after this plan was adopted, the *external tumor* first appeared. A tumor about the size and shape of a black walnut was noticed in the omo-clavicular space (between the external portion of the clavicle and the inner edge of the trapezius in the neck), strongly pulsating; the skin covering it being tender and red with erisypelatous inflammation—leeches were applied with relief to the inflammatory symptoms. In the course of ten days the tumor had *travelled gradually* from its first location, across the neck to the hollow just above the sternum, leaving the omo-clavicular space entirely free, and pulsating strongly in its new position as a tumor about the size of the "butt of an egg." The neuralgic pains continued severe, the oppression in the chest marked, and the cough frequent, dry, loud, and often long continued and distressing. After an interval of four or five weeks, the expectoration became suddenly abundant and purulent in its character, more or less tinged with blood and offensive; varying in quantity from a pint to a quart a day, and continuing for three weeks, but with remarkable relief to the neuralgic symptoms. The oppression in the chest diminished—the tumor also decidedly decreased in size, and retained very little pulsation—the appetite and strength also improved to such a degree that the patient thought himself nearly well. About the 15th of last month (December), the pain began to return in the shoulder, being first noticed about the clavicle, the pulsating tumor began to grow again under the right clavicle and at the top of the sternum, and again in a few days copious expectoration ensued of purulent matter, but now only with partial relief; at this time the right arm became œdematous.

I saw the patient for the first time with Drs. Stevens and Harriott, Dec. 30, 1844. At that time he was confined to his room, but able to sit up most of the time, in good spirits, disposed to conversation, which he could enjoy for hours together, not only without fatigue but rather with relief. His aspect was pale with some emaciation, but bright and cheerful. On exposing the chest, a tumor, egg-shaped, with its larger extremity towards the right shoulder, seven inches in length by three in breadth, extended from the middle of the clavicle on the right side to the inner edge of the middle of the sterno-cleido-mastoid muscle on the left side. The right clavicle, dislocated at its sternal extremity and elevated, passed over the middle of the tumor like a bridge; the upper bone of the sternum was also pushed forwards, but in a less degree, by the pressure of the tumor. The sterno-cleido-mastoid muscle of the right side passed over the tumor and was lost in it, and a line of pulsation along the course of the common carotid on the right side rendered it probable that this vessel also was pushed forward by the tumor. The trachea was also pushed somewhat to the left side. The tumor was extremely elastic to the touch and strongly pulsating in every part, but most so immediately over the sternum; its right portion was more firm to the touch, and here the pulsation was less distinct. There was no thrill or bellows murmur any where. The surface of the tumor was shining, with a faint blush on its more prominent parts ; it was also slightly œdematous, but without heat or marked tenderness. The whole superior portion of the right side of the chest was enlarged, including the parts between the clavicle and the spine of the scapula, and perhaps even lower, while anteriorly the enlargement ceased abruptly with the tumor about the level of the second rib. This enlargement of the parts, in the neighborhood of the tumor, was probably owing, in part at least, to an effusion of serum into the cellular tissue, as the right arm, until very recently, has been much swollen with œdema. It possessed very limited motion in the shoulder joint, and was incapable of being raised to more than one half the usual distance, from stiffness rather than pain or paralysis. The percussion over the chest was good ; but the respiration was bronchial at the summit of both lungs, especially the right, while it was rough and wheezing in other parts, but without marked mucous rattle. The voice was hoarse, the respiration wheezing, the cough frequent and croupy, and attended with a considerable mucous expectoration, semi-opake, partly tinged with blood. It was much relieved by talking and by any mental diversion. The action of the heart was natural and regular, but feeble ; the pulse 108, feeble, equal in both wrists and in both temporal arteries. The appetite was moderate, the sleep pretty good, there were no hectic symptoms. Light and warm emollient applications to the part when the pain was most severe gave decided relief.

Great doubt existed at this time at the consultation whether the tumor was an abscess to which pulsation was communicated by the subclavian artery, or whether it was in truth an aneurism. That the external swelling had first appeared above the shoulder as a distinctly pulsating tumor, that it had always preserved this character with each change of situation, that it had dislocated the clavicle at its sternal extremity, and had elevated it an inch or two, that it was without marked increase of temperature when carefully examined—these circumstances certainly favored the idea that the tumor was an aneurism. On the other hand, the absence of the bellows murmur and of the aneurismal thrill, and above all, the circumstance that the tumor had decidedly diminished in size and in pulsation after the sudden and copious expectoration of what was regarded as pus—these facts were certainly in favor of the existence of an abscess. Besides it was difficult to conceive how an aneurismal tumor, if the primary cause of the neuralgic symptoms, could have existed for so long a time without oppression of the respiration, pulsation, and other symptoms of disturbed circulation. In the uncertainty of the case it was deemed proper to test the character of the tumor by the cautious use of the exploring needle, but this was accidentally omitted for a few days.

On the 11th of January, I saw the patient again with Drs. Stevens and Harriott. During the interval the tumor had increased considerably in size, and pulsated as before. A bluish spot existed upon its more prominent part. There was more anxiety, more cough, more oppression ; the expectoration was also very abundant, a quart at least of opake mucus, tinged of a brown color in parts with blood, in 24 hours ; but no pus was noticed—the œdema had extended to both hands. The examination of the expectoration, which was said to be similar to that noticed formerly when the tumor had diminished in size, and the absence of true pus, together with the general aspect of the case, had much weakened our suspicion of an abscess, while we became much more confirmed in the idea of an aneurism; the exploring needle therefore was not used. Dr. Mott being called in consultation, and after having twice examined the tumor with care, admitted the extreme difficulty of the diagnosis, but was on the whole disposed to doubt the existence of an aneurism. He stated that the tumor did not convey to his touch the true feeling of an aneurism. He was rather disposed to recommend the use of the exploring needle as not likely to do harm. It was accordingly used, and the groove was found to contain only blood.

On the 12th the patient had an attack of faintness from which he never fairly rallied, but gradually sank and died on the 14th without hemorrhage, or increased symptoms of suffocation.

The *post-mortem examination* was made the following day. Emaciation moderate; both upper extremities œdematous; varicose veins running over the anterior part of the chest in the neighborhood of the tumor, which was quite flaccid. The tumor proved to be a false aneurism of the aorta arising from the ascending portion and the arch, commencing just below the origin of the innominata, so that this vessel as well as the right subclavian artery opened into the sac. The mouth of the sac was about the size of an American quarter of a dollar, and had smooth and even edges. The cavity of the sac was about half filled with soft coagula. The right clavicle and upper bone of the sternum were carious, and portions of dead bone adhered to the walls of the sac. The heart was healthy. The lungs were generally adherent to the walls of the chest by old adhesions. They were not disorganized by the pressure of the tumor, or much compressed, but a good deal congested with bloody and frothy serum. The lower lobes in both lungs presented the evidences of pneumonia in the second stage. The bronchi in both upper lobes were considerably dilated, and their mucous membrane, in parts, exhibited the traces of moderate inflammation; in other parts it was quite pale. No ulcers were noticed. The abdominal organ and the brain were not examined.

In reviewing this singular and interesting case, it seems difficult to understand the cause of the peculiar development and progress of the symptoms. 1st. The development of a superficial neuralgia as the earliest and for a time the only symptom. 2d. The existence of an aneurismal tumor for a long period without pulsation or oppression of the respiration even on violent exercise, such as going up a hill. 3d. The singular, and to me unique point where the aneurism of the ascending aorta first presented itself externally, at the top of the shoulder, and its subsequent gradual migration to the top of the sternum. 4th. The absence of thrill or even bellows murmur, a sign by no means constant in aneurisms, but certainly to be expected in an aneurism so near the heart, so little filled with clots, and especially when communicating with the artery by so circumscribed an aperture. The character of the pulsation in the tumor seems to me worthy of particular notice. If a person gifted with the experience and tact of Dr. Mott could say, after a careful and repeated examination, that such a tumor had not the feel of an aneurism, it should certainly teach us caution in relying too implicitly on this method of diagnosis.

ART. II.—*Report of Cases of Epidemic Puerperal Fever, occurring at Buffalo, New York.* Communicated by AUSTIN FLINT, M.D.

THE committee* appointed at the Semi-annual meeting of the Erie county medical society, June 11th, 1844, to "investigate in as far as practicable, and especially from facts occurring in this county, the causes, history, pathology, and best method of treatment of puerperal fever, beg leave to report, that shortly after the adjournment of the meeting of the Society at which they were appointed, a circular announcing the fact and objects of their appointment, and soliciting facts relative to the subject, was printed and distributed to all the members of the Society, in this city and county. It was also sent to various medical gentlemen in the adjoining counties. It was hoped that the members of the Society and the profession generally in this neighborhood, in view of the great importance of the subject, and the remarkable absence of settled principles, or unanimity of doctrine relating to the causes, pathology, and treatment of this disease, would unite in supplying contributions of all the facts, as data for the proposed investigation, which their opportunities for observation might place within their reach.

The committee have, however, been greatly disappointed in the amount of materials which they have received. They have not been honored with a single communication excepting from the city of Buffalo. This has, no doubt, been owing in a great measure to the fact that the disease has not, since the time of their appointment, prevailed to the extent which, from its previous progress in other sections of our county, was then to have been anticipated. But there is reason to suppose that it is also, to a greater or less extent, attributable to an indisposition to the necessary effort, and a want of an adequate personal interest in the Society, or in an undertaking of this kind.

The committee cannot refrain from expressing their regret that this should be a necessary conclusion. Had the members generally furnished for the present investigation, each but a few cases; collectively, the number for analysis, it is believed, would have enabled us to have arrived at interesting and important conclusions. But feelings of regret are not limited in their application to this instance. It cannot but be regarded as unfortunate for the progress of medical knowledge, the general dissemination of established truth, and the elevation of the character of the profession, that there exists to such an extent among medical men, an indisposition to co-operate for common ends of science, and for mutual improvement.

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* The committee consisted of Professor AUSTIN FLINT, M.D., and A. S. SPRAGUE, M.D., of Buffalo; Doctors PRATT of Eden; WALLACE of Aurora, and W. BETH of Wales. The report, herewith published, and in a somewhat condensed form, was presented to the *Erie County Medical Society* at its annual meeting, January 14th, 1845, and has been forwarded for publication in our Journal, by particular request. We take this occasion to thank the committee for their very valuable report, and hope that other Societies may follow so worthy an example. If the local medical associations in the United States would, through committees, composed of their most zealous and intelligent members, investigate in a similar manner, Epidemic and other diseases of our own country, and publish the results in our different Medical Journals, it is hardly possible to estimate the advantages which would thus result from the concentrated labors of the profession. We need but name the Epidemic Erysipelas as one of the diseases which requires such investigation. We regard the report of Dr. Flint, as an excellent model for similar communications. *Ed. N. York Jour. Med.*

We have received from several members residing in this city, the details of *eleven* cases of puerperal fever which terminated fatally, and of *three* in which recovery took place. The former embrace, probably, nearly all of the fatal cases which came under the observation of members of the Society under circumstances which admitted of a full record of the facts being made. A few cases are known to have occurred in which the patients were not attended by any member of the Society, or passed from one medical attendant to another, in a manner which prevented complete observation of the phenomena. No means are at hand to determine the precise number of fatal cases of this disease which have occurred in this city, but it cannot exceed twenty, probably somewhat less.

It is, obviously, an interesting and important point to ascertain the number of cases which have occurred, ending in recovery, in order to determine the ratio of fatality. This branch of inquiry presents difficulties. It is a matter of delicacy to decide what combination of circumstances or symptoms is sufficient to qualify cases to be ranked in the same category with those in which the *fatal termination* leaves comparatively little doubt as to the character of the disease.

It is, unfortunately, true that we are obliged to consider the *termination*, in the present state of our knowledge, somewhat in the light of a *diagnostic* event. To avoid all cavil, in the analysis of the cases with reference to the history, pathology, &c., it is deemed advisable to confine our attention to the fatal cases alone. Concerning these, there will not in the mind of any reader arise a doubt as to their being cases of that form of disease referred to in the resolution of the Society.

These cases are, in number, as already stated, *eleven*. We have subjected them to numerical analysis, in the manner proposed in the printed circular. The number of cases are too few to lead to any settled statistical facts. But, few as they are, this appears to be the best mode of developing whatever truth (fragmentary as it must be) which they contain. It will serve to present the most correct general history which we can give of the epidemic as it has been manifested in this city ; and will lead to some consideration, which, it is hoped, may, to say the least, prepare the mind to study the disease hereafter with greater facility and effect.

These cases, it is proper to premise, have been given by the gentlemen who have supplied them, generally from recollection, after a considerable interval of time since they occurred. On this account they are not all of them so complete in details as could have been desired. The facts which *are* stated, however, it is presumed, may be relied upon as correct. The cases which have fallen under the observation of individual members are so few, that the memory is not burthened, and there is not that liability to confusion which would render the records less reliable if the number had been greater. And, moreover, the character of the disease is such that the phenomena are impressed on the mind with a force and vividness which ensures their faithful recollection.

It may be added, that the eleven cases have been furnished by *seven* different physicians of the city. They were distributed as follows :

Two of the number reported *two* cases ; one *three* cases. The remaining four reported but a single case severally. These cases occurred in a period of time intervening between February 18th, and June 15th, 1844.

The dates of their occurrence were respectively as follows:

February	18th	2	cases,
"	19th	2	"
"	25th	1	case,
March	7th	1	"
May	4th	1	"
"	20th	1	"
"	26th	1	"
"	29th	1	"
June	15th	1	"
		11	cases.

It will be observed that, in *two* instances, *two* cases were coincident on the same day; and the days on which this happened were consecutive days. It may be important to state in this connection, that these *four* cases occurred in the practice of *four* different physicians, who were in no wise associated together; and also at different and remote distances of location.

As regards the location of the patients, it so happens that all resided at distances from each other, more or less remote, and were at quite opposite sections of the city.

The disease exhibited no preference in locality, but seized upon patients, each situated at a point disconnected from the others.

The *ages* of the patients exhibit diversity. They are respectively as follows:—

15	1 case,
20	2 "
26	1 "
27	1 "
25	1 "
30	3 "
32	2 "
	11

Nothing is therefore deducible as to the liability to the disease being incident to any particular term of life.

As regards the fact of its following the first labor, or its occurrence being affected by the number of previous labors, we arrive at nearly a similar conclusion from a comparison of the facts under consideration.

In *four* of the cases it followed a *first* labor.
In *five* " " " a *second* labor.
In one " the patient had had 3 or 4 children.
In one " the patient had had 3 "

In one of the cases, in which it was a second labor, the disease followed a miscarriage at the 7th month with twins; both children born living—one shortly dying, and the other still living.

One only of the patients miscarried. This was the youngest patient, being only 15 years of age; a victim of seduction, and driven from her home in disgrace.

As respects the condition and occupation of the patients, it suffices to say, that none were known to have been in destitute circumstances. Several were among the class who enjoy all the comforts of a sufficiency of pecuniary means. A few were laboring women, but in comfortable circumstances. So far as these cases go, they do not furnish grounds for the suspicion that the external conditions of life are concerned in the duration of the disease.

Of the general health and constitution of the patients exclusive of the period of gestation preceding the disease.—In eight of the cases it is stated to have been *good.* In *one* case the patient had suffered long, and much, from a variety of neurotic troubles; and in *one* case, it is stated that the patient was of a "feeble scrofulous habit." In *one* case, nothing appears on the record with reference to this point. Rejecting this case, the deduction from the remaining cases is, that in 8-10 of the cases it occurred in females of healthy constitutions. This conclusion takes our first impressions somewhat by surprise. Of course, however, with reference to this as to all other points, a much larger collection of cases is requisite in order to settle upon any determinate statistical results. The number of our present cases are too few to permit of our making due allowance for exceptional circumstances or coincidences. Nevertheless, they are sufficient to establish some negative, if not positive facts. We are certainly authorized to conclude that a good constitution is no ground of immunity from danger of the disease.

Next in order naturally follows the inquiry, *what was the condition of the general health of the patients during the gestation immediately preceding the disease?*

In *one* of the cases there is nothing stated on this subject. Of the remaining *ten* cases, in precisely one half, the health of the patients is recorded good up to the time of confinement. In the other half the difficulties experienced during gestation are recorded as follows;—

"Pain and soreness at the lower part of abdomen," .	1	case.
"The same, and especially in neighborhood of the groin" .	1	"
Health stated to have been bad without particulars, . .	1	"
Various neuralgic and neurotic troubles	1	"
Rubeola 5 weeks before confinement, preceded and succeeded by bronchitis, which continued up to time of labor, ...	1	"
	5	

We pass now to make a comparison with reference to a point bearing upon a very important question relating to this disease, viz.—the question as to its being derived from a *materies morbi*, received through the medical attendant, from other patients affected with the disease, or with other diseases supposed to be kindred in nature, and capable of producing the one under consideration, by infection. It is believed by many members of our profession, and various facts (which it does not belong to our present purpose to consider) seem to sanction the belief, that the disease is often, if not generally, produced by a morbific principle generated in patients already diseased—that it is, in other words, propagated by contagion and infection. Various facts have, also, been adduced to show that the disease known as epidemic erysipelas is capable of generating a morbific principle, which, when imbibed by a woman in the puerperal state, will cause the development of *puerperal fever.*

It is obvious, that this is a matter which has very important practical relations, and which it would be very advisable to settle upon a firm basis. In our printed circular, it was therefore requested, that in the record of each case, the attending physician should state, whether at the time of its occurrence, or shortly previous, he was attending, or had been in attendance on, cases of puerperal fever, or of erysipelas. The records of the cases which we have received are explicit on this point. In not one of the 11 cases had the attending physician in charge at the time, a case or cases of puerperal fever. In *nine* of the cases the attending physician had not shortly, previous to the occurrence, attended or visited a case of puerperal fever. In the *two* cases not included within this last enumeration, the physician had a few days previous performed a post-mortem dissection of a puerperal case in one instance ; and had attended a case five days previous in the other instance. In seven of the cases it is stated that the attending physician was not at the time, and had not shortly previous attended a case or cases of erysipelas. Of the remaining four cases ; in *one*, the fact as to erysipelas is not stated. Of the other *three*—in one case, the attending physician was visiting a family, the children of which were afflicted with the epidemic sore throat, not unfrequently associated with erysipelas. No erysipelatous complication, however, at that time existed ; but it was developed in a case which occurred subsequently, and proved fatal.

In another case, the physician was attending a patient *then* convalescing from an attack of erysipelas. And in the fourth case, the attending physician was in attendance on a case of severe erysipelas, succeeding to an injury. (Traumatic erysipelas.)

In so far as deductions are admissible from these cases, they are certainly opposed to the development of the disease from a specific contagion received from patients already affected with puerperal fever.

In *two* only of the cases, could this mode of causation be the subject of even a remote suspicion. And in these cases, when we consider that the cases happened at the very time when there were indications that the epidemic was about to prevail here, as it had in other places ; that the cases alluded to, fell within the practice of a physician extensively occupied in the branch of midwifery ; and that from him, and from other medical brethren of the city, who had a case or cases of the disease, many females (the precise number has not been ascertained) were equally, and in the same manner, exposed to any influence which might be supposed to be carried about the physician's person—when these considerations are taken into account, in connection with the entire absence of all room for suspicion of contagion in *nine-elevenths* of the cases, it must appear far more rational and philosophical to consider the origin of the two cases referred to, as attributable to a common endemic or epidemic cause, rather than to entertain the idea of their being produced by a material transmitted through the medical attendant.

Of course, it is by no means assumed, that the question as to the possibility of contagion is settled by this investigation. Our conclusions will relate only to the question, as to the origin of these particular cases in this mode. Thus limited, there can be no doubt, that the question may be considered to be satisfactorily settled.

In connection with this topic, it is important to recollect the facts disclosed by the analysis as to the different periods at which the different cases occurred, the different points of location at which the patients resided, and the number of physicians not associated with each other, among whom they were distributed.

These circumstances serve to strengthen the conclusion more directly deduced; and it is truly a subject of regret, that we are not provided with a sufficiently large number of cases, in order that the result might be of a more determinate character, and susceptible of a more general application.

With reference to the derivation of the disease from cases of epidemic erysipelas, in so far as this question involves the instrumentality of the physician as a means of communication, the conclusion is quite as definite, limiting in the same way our view to the cases under consideration.

In *three* of the number only, were the attending physicians in any way connected with erysipelatous disease, at the time the puerperal cases occurred. In one of these cases, the erysipelas does not appear to have been of an epidemic character, but succeeded, as is not unfrequent, an injury.

In one of the other cases, erysipelas did not at the time actually exist, but epidemic sore throat, which in one case, at a subsequent period, in the same family, became complicated with erysipelas. In the other of the three cases, the patient had passed through the severity of the disease, and was convalescing, requiring at that time only one daily visit.

The question as to its origin from the *materies morbi* of erysipelas is, however, open to the remark, that the patients may have been exposed to an infectious influence in other modes, than through the physician. On this point we are without any facts as to the patients who formed the subjects of our cases. We are, therefore, incompetent to prosecute further the inquiry.

This difficulty, it is to be observed, does not stand in the way of the contagion or infection from cases of puerperal fever. All our cases are known not to have been puerperal patients, other than through the medical attendants.

Of some facts pertaining to the connection of the disease under consideration with erysipelas, we shall speak hereafter.

Of the character of the labor which preceded the puerperal attack.

In *nine* of the cases, the labor is reported to have been entirely natural. Of these *nine* cases, this statement is only modified in *two* instances—in *one* of which, it is recorded as severe, owing to the large size of the child; and in the *other*, as rather lingering.

Of the *two* cases not included in this enumeration—*one* was a miscarriage with twins at the seventh month. In all other respects, natural and free from difficulties.

In *one* case only, was the labor, strictly speaking, unnatural and difficult. In this case, the patient, after tedious natural efforts, was delivered with forceps.

We are certainly authorized to infer from the analysis in this particular, that the origin of the disease is in no wise connected with protracted or difficult labor. Probably, during the period within which these cases occurred, more than eleven cases of labor attended with as great difficulties as in the single case, in which instruments were employed, came under the observation of our brethren of the city collectively, without being followed by puerperal fever.

We will now proceed to the analysis of the cases, with reference to the phenomena appertaining to the course of the disease. But first, *of the interval between the labor and the attack, and of the character of the attack as regards suddenness or gradual supervention.* In *one* case the attack came on eleven hours after labor; this was the shortest interval. In *one* case twelve hours intervened. In *one* case twenty-one hours. In *one* case twenty-eight hours. In *one* case thirty hours. In *three* cases thirty-six hours. In *one* case forty-eight hours. In *one* case fifty hours; and in the case presenting the largest interval, the attack was deferred until the fifth day after labor. In *nine* cases the attack is stated to have been sudden in its accession; in *two* only the symptoms supervening with a gradual approach. We need not delay to make any observations under this head, but proceed to speak successively of the several most prominent symptoms.

a. The Lochial discharge.—In *one* of the cases the fact with reference to this symptom is not mentioned; of the remaining ten, in *nine* instances this evacuation made its appearance as usual, and in the other instance it is so inferred from the record, although it is not distinctly stated. In *four* of these cases it became suppressed shortly after the development of the disease. In *two* it was greatly diminished. In *one* case it is not distinctly stated whether suppression took place or not; and in *three* cases the discharge continued through the progress of the disease.

It was observed by Dr. Hamilton, of Edinburgh, that the continuance of the lochial discharge was a sure criterion by which puerperal peritonitis might be diagnosticated from puerperal fever; assuming that the two are distinct diseases, to which all do not agree. But if the case under present consideration be regarded as exemplifying puerperal fever (which can hardly be doubted), they disprove entirely this opinion; they go to show that the suppression or continuance of this evacuation are neither essential circumstances, diagnostic or otherwise, in the history of the disease; but that the evacuation is oftener suppressed or greatly diminished in its quantity.

b. Of the lacteal secretion as affected by the disease.—*Five* cases are to be thrown out of the analysis for want of recorded facts. Of the other *six* cases, the secretion of milk took place in abundance in *two* instances; in *one* of these cases it was afterwards suppressed, in the other it continued, notwithstanding the progress of the disease. In *four* cases the secretion did not take place; but in *three* of these, hardly time enough elapsed between the labor and the attack for it to take place in the usual order of events.

We have only to remark under this head, that the prevention and interruption of this secretion does not appear to be necessarily involved in the disease, although it may not appear in a large proportion of cases, as is generally supposed. That it may continue, and the disease pursue its fatal course, a single case is, of course, sufficient to demonstrate.

c. Of Chills and Rigors.—In *four* cases they are stated to have been severe. In *four* cases they existed, but the degree of intensity is not recorded. In *two* cases they were present but not severe; and in *one* instance only of the eleven cases they were not well marked.

This symptom is one of the most constant of the symptoms, and is to be considered highly characteristic, although by no means to be relied upon with an exclusiveness, since we all know it not infrequently, and perhaps more generally, attends the changes following labor; and as our present analysis shows, *may* not be well marked, even when puerperal fever is about to take place.

d. Next, of *Pain, its Location and Character.*—As this symptom may be deemed to possess some peculiar importance, we will quote the description given in the several records separately.

It is described in one case as "violent in the pubic region, at first periodic, afterwards constant, and extending over the whole abdomen, continuing to be aggravated at times."

2. In another it was "intense and paroxysmal at first, veering with greater severity in the progress of the disease with temporary alleviation, and continuing until shortly before death."

3. In another it is stated to have been "violent in abdomen, with cramps in limbs."

4. In another, "severe throughout abdomen, but not severe in the hypogastric region."

5. In fifth—"great pain in uterine region and back" is the language used.

6. In sixth—"great pain in bowels, in left iliac region especially."

7. In seventh—"pain all over, but particularly in abdomen."

8. In eighth—particular location and character not specified.

9. In ninth—"slight pain in back and left hypogastric region 2 hours after the chill; none directly succeeding. No pain 10 hours afterward."

10. In tenth—"pain severe in left hypogastric region." In the remaining case it is not distinctly stated as to existence of pain.

According to the history of these cases in this particular, pain is a constant, and, in nearly every case, a prominent symptom; yet it is not necessarily severe, it having been in a single case not prominent.

It is generally, but not invariably, referred especially to the region of the uterus; or, laterally, to one or both sides of the uterine region.

e. The question of tenderness follows next in succession.—In *two* cases the records are deficient in information on this point. Of the remaining *nine* cases, tenderness on pressure over the abdomen was distinctly marked in eight cases. In the single excepted case, no tenderness was discoverable shortly after the attack, but it was subsequently developed in a slight degree. In *four* cases it is recorded as great in degree. In *two* cases the degree is not stated, but only the fact of tenderness. In *one* case it is reported to be especially present "along the course of the broad ligament;" and in another to be present more particularly in the "right hypogastric region."

The same general observations which were made respecting pain, are here applicable.

f. Next in order comes the inquiry as to the existence of *tympanitis of the abdomen.* In *three* cases the records are defective on this point. Of the *eight* remaining cases it is distinctly stated in *three* to have been coincident with the attack. In *one* case it took place 48 hours after the attack; in another 55 hours; in another 6 hours; in another 24 hours. In *one* case it is distinctly stated *not* to have existed shortly after attack, but was subsequently developed. In *one* case it is stated to have existed, but not the time of its development. With respect to the degree of the tympanitis, the cases are generally defective.

This connection teaches us that this symptom is sometimes present from the commencement; and, in the great majority of instances, is developed sooner or later in the progress of the cases; but that it is not an essential element of the disease.

g. Of the condition of the bowels as respects alvine discharges between the time of labor and the attack, and coincident with the latter, the records of the cases generally do not state distinctly. In *two* cases castor-oil was given after labor, which operated favorably. In *one* a cathartic of calomel and jalap, which was followed by fœtid stools. There seems to have been nothing in this subject exciting particular attention in the observers.

h. The same is true with reference to the *appearance of the tongue.* In *six* cases there is no information on this point. In *two* cases it is stated to have been "dry, reddened and contracted" (two cases by different observers). In *one* "clean at apex, yellowish white at base, and moist throughout." In *one* "dry and furred," and in *one* case "coated."

i. Of gastric symptoms, nothing is recollected in *four* cases; of the remainder, in one case, there was "thirst, nausea, vomiting of much yellow bile-like fluid;" and this was a prominent symptom through the disease, but the patient had taken an ant. solution in this case. In another case there was "thirst, nausea and gastric tenderness." In another "urgent thirst and considerable nausea—frequent vomiting in the last 24 hours of disease of green bilious fluid." In another "nausea and gastric distension. In *two* cases—"eructation of gas," was the only prominent gastric symptom. The phenomena under this head have evidently very little importance in their relations either to the history, pathology or the diagnosis.

j. Concerning *diarrhœa,* which is known to be sometimes connected with this disease, information was not requested by particular designation in the circular. Yet, in cases in which it was a well marked or prominent symptom, it is fair to infer it would not have been omitted in the records. It is stated to have occurred in *two* cases. In *one* of these it supervened toward the close of the disease. In the *other* it took place suddenly on the second day, whilst the patient appeared to be improving, and continued for about 12 hours without any treatment, the patient residing at a distance, and the attendance of the physician not requested. The attending physician in his report is disposed to attribute the fatal issue in this case to this circumstance.

In the remaining *nine* cases it is presumed to have been absent, or at least not at all prominent.

k. Next of the *urinary secretion.* In *eight* cases there is no information on this point. It is stated to have been scanty in the *three* cases remaining, and its color brightened in *two* of them. The only inference which can be here made is, that this excretory function would seem to be but little involved in the disease.

l. Of the phenomena appertaining to the skin.—In *two* cases they are not recorded. In the others they are stated as follows:—In *one*, "hot and dry according to recollection;" in *one*, the same, subsequently becoming moist; in *one*, "dry with erysipelatous patches on the hands and arms;" in *two*, simply "hot;" as to dryness or moisture, not stated; in *one*, "hot but not dry;" in *one*, "cool but moist;" in *one*, "not very hot, and gently perspirable." Thus, it is perceived there is no uniformity in the condition of the skin.

m. Next, of the circulation as indicated by the pulse.—The statements, with reference to this point, are deserving of being detailed in the language of the records separately.

In *one* case the pulse "was 120—full, soft, compressible; never above 125; generally maintained 120 through the disease;" in *one* it is stated "much accelerated at first, quick and compressible, and rose to 150;" in *one*, "140 from the time of attack, small, soft and compressible; in *one*, "140 four or five hours after the attack, when the patient was first seen, quick, sharp beat, not easily compressed;" in *two*, simply recorded "full;" in *one*, "small and compressible;" in *two*, 120 at first, rose to 140 and 170; in *one*, of these stated to have been *feeble*; in *one*, "112 after attack," said to progressively increase, but extreme of its rise not stated: "full but compressible."

What are the conclusions to be deduced from the analysis? A very considerable, often a great acceleration obtained in all the cases from the outset. In nearly all, the frequency rose rapidly to a very great extent. The lowest number at the commencement was 112. This is an important truth, both in a pathological and diagnostic view. Another point of uniformity seems to be an absence of *hardness* in all the cases. This may be considered as highly important. But, as respects the other characters, there is considerable variation. In some it was *full*, in others *small*, but in only one instance is it stated to have been *not* compressible. We will only remark here, that the pulse in those cases certainly did not manifest the qualities characteristic of *ordinary serous inflammations.*

n. Next, *of the mind before and after the attack.* Its condition *before* the attack, is involved in the inquiry concerning the causation of the disease; hence, information was derived on this point distinctly. The cases are, however, deficient in data on this subject, in three instances.

In *six* of the remaining eight cases, it is stated that there were no evidences that the patients anticipated or experienced a dread of the disease. In seven cases, the mind appeared to be clear and tranquil generally throughout the disease. In one case, the circumstances appertaining to seduction and banishment from home, it would be suspected, might have had some agency in predisposing to disease; there was, however, no sense of danger felt by this patient until toward the close of the disease. The mind, afterward, appears to have been in a state of exaltation, accompanied with entire cheerfulness and resignation.

On the whole, we can discover no evidences in these cases that mental causes were in the least degree instrumental in the production of the disease; and a calm, resigned condition through the disease, would seem to be the general rule.

o. Lastly, *the state of muscular strength claims notice.*

In *five* cases there are no data for comparison. Of the balance, three exhibited, according to the record, "great prostration." In *two* cases, it is stated that *prostration* was *not* marked. In *one* case, the record states, "nervous excitability at first, followed by prostration."

Prostration, therefore, although a frequent, is not an invariable symptom.

So much time has been necessarily occupied in the comparison and enumeration of the several elements of the general history of these cases, that we cannot devote any space to a general summary, and the reflections which might be thereby suggested, but must pass at once to the appearances presented on dissection, and the treatment which was pursued in the cases furnished. We will then devote a little space to some remarks on the causes and pathology of the disease.

Post-mortem examinations were held in *four* instances; being limited, in each instance, to an inspection of the abdominal viscera.

In *two* of the cases, the appearances were recorded by the physician who performed the dissections immediately after the event. The first is as follows—

Examination twelve hours after death.—Effusion moderate into peritoneal cavity; estimated at ℥xvi. The upper part clear serum; the lower portion in the pelvis, muddy. A few small floating coagula of lymph found in lower part of abdomen, by the side of uterus. General aspect of peritoneal membrane healthy, slightly arborescent, but no distinctly inflammatory redness. Stomach and intestines much distended with flatus, some arborescent lines of redness seen externally on intestines; no diffused redness. Intestines not examined internally. Uterus about as large as the double fist; soft and doughy to the touch. No softening, infiltration of pus or other fluids into substance; cut surfaces were white; mucous surface covered with layer of blood, partially coagulated and decomposed.

The second record is as follows—

" *Examination fourteen hours after death.*—Body not emaciated, abdomen moderately tympanitic; unusual fœtor for so short a period after death. About a pint of bloody effusion into peritoneum; some congestion of small vessels in coats of large intestines; large and small intestines tympanitic; around fallopian tubes and ovaries on each side, but especially on the right, purulent-lymph; the ovaries covered with a layer of it; ovaries of a dark color, and infiltrated with serum; peritoneum did not present in these, or any localities, distinct evidences of thickening or inflammatory redness; uterus supposed to be of normal size, doughy, internal surface covered with layer of dark, grumous blood; mucous membrane white, and not softened, at fundus, attachment of dark coagula, occupying space of about one and a half square inches. At the fundus and upper posterior and lateral portions of uterus, the venous sinuses presented an intense diffused redness of the lining membrane; it seemed also thicker and firmer. In these respects, the contrast was striking with the sinuses in other parts of the uterus, which were perfectly white.

In the two other cases, the appearances are given from recollection, after a considerable time since the cases occurred; but, in so far as they go, are worthy of reliance.

In one, there was as follows, according to the record:

"Intestines distended with gas; a small quantity of bloody serum in the peritoneal cavity, containing small flocculi of lymph; walls of uterus and parts in neighborhood contained at peritoneal surface several small collections of purulent matter; large quantities of purulent lymph covered the parts adjoining the uterus; the ovaries contained several small cysts filled with clear fluid. The substance of uterus was soft, and contained some fœtid bloody matter; no redness of venous sinuses."

In the other case, there were as follows:

" Intestines and stomach meteorised; slight indications of peritoneal inflammation, about a pint of serum effused, redness and lymph over the ovaries and broad ligaments; in substance and internal surface of uterus, no evidences of disease."

These dissections are not sufficiently minute and comprehensive to meet the requisitions of modern science. The descriptions of the appearances of the abdominal organs are too cursory; and to be complete and satisfactory, the examinations should have embraced other organs, and the condition of the blood, with reference, if not to positive, to negative facts, which, in medical investigations, are hardly less important. A full dissection in some, certainly, and probably in all the instances, was impracticable from the circumstances of the cases.

What is the inference, in so far as the facts warrant any inference? It is, that some degree of peritoneal inflammation exists; but the post-mortem evidences of this inflammation do not correspond with the severity of the local and general symptoms during life; and the rapidly fatal character of the disease. This reflection could not but arise in the minds of all who witnessed the dissections, although it was known in several instances, if not in all, to be opposed to views entertained by the observer before the parts were exposed.

With reference to the redness of some of the venous sinuses of uterus in one case, this appearance was not found in another subsequent case, although diligently sought after. It is, perhaps, more rational to attribute it to imbibition after death, than to pre-existing inflammatory action.

We pass now to the treatment pursued in these cases, and the probable influence to be attributed to this source.

This is certainly, practically, the most important point in the analysis, and were it not for the length to which the report is already extended, we should be disposed to present the facts bearing on this subject as fully as possible. As it is, we will submit the treatment pursued in each of the cases, condensed as much as practicable, and in this connection, state the duration of the disease in the cases respectively.

Case No. 1.—The treatment consisted first (which was pursued shortly after the attack) of sol. antimony and mercurials in alterative doses every four hours. The pains were relieved under this treatment. Venesection was practised sixteen hours after attack to ℥ xvi: on the 2d day, six leeches applied to abdomen, vesication toward close of disease over abdomen, hot fomentations, from the first to abdomen.

Duration of disease, four days (96 hours); attending physician states in note, that in another case he should abstain from bleeding, but give narcotics, and perhaps stimulants.

Case No. 2.—The treatment pursued shortly after attack, consisted of laudanum injections, hot fomentations; Dover's powder and camphor; followed by castor oil. The symptoms subsequently seemed to be relieved, so that the patient was deemed progressively amending. Six leeches were applied 38 hours after attack, V. S. 20 oz. shortly afterward; followed by calomel, x grs., opium 2 grs.—which were repeated soon after. V. S. repeated 12 hours afterward to ℥ vi. Duration of disease, 62 hours.

Case No. 3.—First treatment of the attack—enemata to move bowels; opium and camphor with diffusibles. Blister to abdomen, hot applications to extremities, no general nor topical bleeding. Duration, twenty hours.

Case No. 4.—Copious venesection (precise amount not stated) four or five hours after attack, calomel and opium—seemed much relieved after bleeding. Subsidence of pain for eighteen or twenty hours—pulse diminished in frequency and more soft. Eight or ten leeches to abdomen shortly after venesection, hot fomentations, enemas, twenty-five hours after first bleeding, repeated V. S. to eight or ten oz., abdomen covered with blister—less relief, castor oil. Duration fifty-four or fifty-five hours.

Case No. 5.—V. S. shortly after attack twenty oz. cath. calomel, followed by oil: fomentations, no relief. Several hours afterward a second V. S. to sixteen oz., repeated calomel and oil, no effect having taken place from the first, 12 hours afterward decided improvement, Dover's powder prescribed; and patient considered to be on the road to recovery. Owing to distance, attending physician did not see the patient for twenty-four hours; the friends disregarding his directions to send if any untoward circumstance occurred. In the mean time severe diarrhœa had continued for twelve hours; and patient was found in a state of collapse. Duration about sixty hours.

Case No. 6.—V. S. three hours after attack to twenty oz., fomentations; cath., of salts and senna, rejected, and followed by calomel. Three hours afterward twelve leeches to abdomen; three hours afterward castor oil and enemas; five hours afterward opium and calomel, no sensible relief of symptoms in the progress of this case. Duration twenty-one hours.

Case No. 7.—Opium, camphor, and mercury from the first; followed by blister and stimulants—no relief. Duration eighty hours.

Case No. 8.—Treatment similar to the last. Duration sixty hours.

Case No. 9.—Four hours after attack, twelve leeches to abdomen, followed by poultices. Opium, grs. 2 every four hours. Relief and a comfortable night followed. Nine leeches twenty-four hours after the first application; opium and calomel continued, twelve hours afterward (i. e. 40th after attack) V. S. ℥ viii—twenty-four hours afterward eight leeches, twelve hours afterward V. S. ℥ vi. Duration three days.

Case No. 10.—Opium, camphor, with calomel in alterative doses, from the commencement, no sensible improvement of symptoms, excepting of pain. Duration three days and a half.

Case No. 11.—Domestic measures in the hands of the nurse were first pursued to procure perspiration, which succeeded. Cath. of oil followed by Dover powder, prescribed by medical attendant. Alleviation of symptoms ensued, but they became subsequently aggravated; V. S. ℥ xx. with apparently decided benefit; calomel and Dover powder, and mustard cataplasms to abdomen. Afterward venesection—no pain after the bleeding. Duration three days.

Attending physician attributes the fatal issue to the venesection; which he would under similar circumstances on no account repeat.

In all cases but one in which blood was drawn, it is stated to have been buffed and cupped. In the excepted case, nothing is recorded on the subject.

The treatment pursued in these cases severally, is evidence of the uncertainty which hangs over this subject in the minds of practitioners. In conversing with different members of the profession, it is found that great diversity of opinion exists with reference to this matter. The most prominent point of difference has reference to the propriety of depletion by blood-letting. In no branch of the investigation does the regret that the collection of cases is so small, more forcibly present itself than here. A quadruple number would perhaps have led to some very satisfactory deductions. As it is, it will be difficult to draw any positive inferences.

As the cases were all fatal, of course success of medical treatment does not enter the analysis. We can only compare as to the sensible relief afforded of a temporary nature, and the difference in the duration of the disease. Directing our attention to the true relation of blood-letting with the time which intervened between the attack and the dissolution, we may arrange the cases into the following classes:

The first class will embrace three cases, in which blood-letting by V. S. was practised shortly i. e. within a few hours after the attack.

There are three cases to be included within this class. The duration in these cases respectively is as follows :

	No. 1	54 hours.
	" 2	60 "
	" 3	21 "
In all		135
Giving a mean of		45 hours.

The second class will embrace three cases in which no bleeding whatever was practised. This will include four cases. The duration respectively is as follows :

	No. 1	20 hours.
	" 2	80 "
	" 3	60 "
	" 4	84 "
In all		244
Giving a mean of		61 hours.

The third class will embrace cases in which bleeding was not practised shortly after the attack, but subsequently in the course of the disease. This class includes three cases ; duration as follows :

	No. 1	96 hours.
	" 2	62 "
	" 3	72 "
In all		230 hours.
Giving a mean of		76 "

In one case not included in either of these cases topical bleeding was pursued shortly after attack, and general bleeding afterward. The duration was 72 hours.

It is important to observe that the two extremes of duration of the disease in each class present a wide interval.

In the first class from	21 to 60	hours.
In the second "	20 to 84	"
In the third, "	72 to 86	"

If we were to make deductions from these enumerations, it would result that the disease is shortened in its fatal course by blood-letting ; and that blood-letting practised late in the disease tends to prolong its duration. The latter would certainly be an unexpected and not very rational conclusion. We are not authorized to draw numerical inferences of this nature from so few cases. Yet it seems fairly deducible that the disease, as presented in this epidemic, was not favorably affected by blood-letting ; nor, on the other hand, were its consequences pernicious.

As to its adaptedness to the disease, in so far as the investigation of these cases is concerned, it seems impossible to arrive at positive conclusions. We must consider the question open for discussion, and only to be settled by the collection of a greater number of facts.

With reference to the other remedial means, it is believed no benefit will be derived from instituting comparisons. We therefore here leave, for the present, the subject of the treatment.

Having now presented to the Society all the facts relating to the fatal cases placed at our disposal, it will be expected that we should state the general views of the cases and pathology of the disease, which, in the opinion of the committee, are most consistent with these facts. It is unnecessary to say anything of the necessity of *brevity*. This, it is to be feared, is but too apparent to the Society. In order not to lengthen the report, we will present a few propositions, expressing, we do not say truths that are to be considered as established, but which appear most probable, without entering into the course of reflection, or the reasoning which have led to them.

1st. Puerperal fever appears to be an epidemic disease, originating, like other epidemics, in certain inappreciable general causes, which are either migratory, or developed successively in different localities from unknown endemical causes. It appears to have some connection with other epidemic diseases—more especially that known as epidemic erysipelas. Here it may be stated, that the latter disease had prevailed for some months to some degree, before the occurrence of any cases of puerperal fever; continued while these cases were in progress; and has continued, but in a less extent, since that time. The relation of puerperal fever to erysipelas is also illustrated by several facts which occurred in connection with the cases which have been considered. The most striking are the following: Two ladies who watched with a patient with puerperal fever the last night of her life were, within two or three days afterward, each seized with the characteristic symptoms of epidemic erysipelas. In one, the erysipelas was developed, and she passed through a dangerous illness. In the other, all the premonitory symptoms were experienced; but subsided after an active emetic. A laboring woman who was employed to wash the clothes of the same patient, and who, during this duty, received a slight scratch upon the hand, was seized with inflammation of the absorbents extending up the extremity to the neck; with all the constitutional effects of inflammation of the absorbents after a wound received in dissection; and died after a short illness. In one of the cases of this collection, erysipelatous patches existed on the arms and hands. And in another case, which from want of details was not included in the collection, distinct erysipelas was developed on one upper and lower extremity during the short career of the disease. These circumstances go to show some relationship between the two diseases; as to the precise nature of the relation, we have not facts upon which to base any positive conclusions.

It appears to us, however, most probable that they are effects of a common epidemic cause. The occurrence of labor appears to bear to the disease the relation of an exciting cause; leading to the development of the effects of a morbid influence already existing within the system, but in a latent form. It is possible that gestation may contribute to promote the predisposition to the reception of this morbid influence, or its development.

2d. Puerperal fever appears to be, in reality, an essential febrile condition. It is not merely a peculiarly modified form of peritonitis. We have here in the symptoms, the same fact which especially characterizes all essential fevers—viz. a disproportion between those of a local and those of a general nature. And in the appearances after death, the analogy also holds good. The local changes and evidences of disease are inadequate to explain the severity and rapidly fatal character of the disease.

The local circumstances incident to gestation and labor may sufficiently explain the fact of the peritoneum being the seat of the local affection which complicates the disease. They are not sufficient of themselves to account for the fact that peritonitis is developed, without any reference to a more general cause. How seldom is purely local peritonitis developed after delivery, under ordinary circumstances!

3d. Such being the origin and character of the disease, it is easy to conceive of the fact of its presenting great difference in its phenomena at different times, and in different locations; and, also, that quite different methods of treatment may be applicable at different periods and places. Different individuals, therefore, who contend for different therapeutic principles as based upon their individual experience, may each be entirely correct. It is probable that no particular line of treatment would be applicable to the disease in all its forms in the same epidemic; still less in different epidemics. This (if true) is a highly important consideration in various points of view.

We will add here, with reference to treatment, first, that, from the preceding views of the etiology and pathology, it follows, that we are to have reference in this disease to a general disease, the nature of which, like all general diseases in the present state of our knowledge, is obscure—to an epidemic, which, like all epidemics, is variable in its character and phenomena. And, *second*, we are not to overlook a local complication which is imposing in its occurrence; and, although not sufficient of itself to constitute the disease, yet constituting a very important and dangerous element of it. A due regard to the patience of the Society compels us to omit further remarks on this and other topics which would suggest themselves in this connection.

[Here follows a report of several cases of puerperal fever, successfully treated, which we omit for want of space till our next number. The report closes with the following remarks]—

With reference to the symptoms and severity, the above cases exhibit great similarity to those which were fatal, in the phenomena presented, and in the dangerous condition of the patients. Their comparison with the fatal cases, as regards treatment, is obviously important. But in this respect, it will be seen that they differ among themselves. In *two*, venesection was practised early in the disease. But here they did not differ materially from those of the fatal cases. The distinctive treatment in these two cases consisted chiefly in the early application of leeches; and in the continued detraction of blood only, by this method, for a longer period and to a greater extent. Both cases were complicated with diarrhœa. Cathartics were not employed; but morphia in decided doses, followed by tonics and stimulants.

In the third case the treatment was characterized by an absence of all depletion, and the employment of tonics and stimulants, in conjunction with alterative doses of calomel and counter irritation.

The reporter of this case stated verbally to the committee, that he had other cases of equal severity, which terminated favorably under similar principles of treatment, which he had not time to report in full, in season to be incorporated in the report.

Our remarks upon the favorable cases must necessarily be very brief. The inquiry will naturally arise, whether they are instances of a form of disease identical with that in which the result was unfavorable; or, if identical, whether the disease was not presented with a more modified degree of intensity? We cannot, after occupying already so much time, enter upon a discussion of these questions. We can only direct attention to one or two prominent facts bearing on the point, and give the conclusion which appears to our own mind the most reasonable. It is important first, to observe that the *dates* of the favorable cases, with the exception of the first, are at periods subsequent to the last date of the fatal cases—since which, it is not known that any death from puerperal fever has taken place in this city. It is also well known to the practical physicians of the city, that epidemic erysipelas, since the date of the last fatal case of puerperal fever (June), has prevailed much less than before, and with a modified degree of severity. Another very important fact is, that the favorable cases recovered under quite different modes of treatment. In two cases, depletion generally, and especially locally, was the predominant feature of the treatment. In the other, calomel, opium and stimulants, with counter-irritation over abdomen, but without detraction of blood. Assuming that the cases were equal in severity and degree, we cannot, from the facts presented to us in these cases, draw any conclusion as to therapeutics. The different methods (as regards loss of blood), in the cases opposing each other in this particular, will naturally destroy each other; we are compelled to consider the disease (in so far as our present investigation is concerned), as uninfluenced in its termination either by the employment of blood-letting or by its omission. We are not authorized, in short, to draw from these cases any inference on this point.

On the whole, it is the opinion of the committee, in view of the facts before us, that after the period at which the last fatal case occurred, the unknown epidemical influence (supposed to be identical in the causation of puerperal fever and epidemic erysipelas) became deprived of some of its active powers, or lessened in its amount; or, that the systems of our population became inured to its influence—and that, in consequence, the diseases determined by it were correspondingly modified. Knowing nothing of the nature of the epidemic cause, and the precise mode of its operation, it would, of course, be only conjecture to form any opinion as to the kind of modification. Nor do the symptoms of the disease, in the cases reported, give any striking points of distinction. In the present state of our knowledge we can only say, that there probably existed a *lessened tendency to a fatal result.*

The resolution of the Society embraced (by amendment) epidemie erysipelas as a subject of investigation by the committee. The great length to which the report has unexpectedly been extended, would, of itself, be a sufficient apology for not devoting to this disease a distinct examination. But, in addition to this, no materials whatever for such an investigation have been placed at the disposal of the committee.

ART. III.—*On the Pathology of Leucorrhœa, Fluor Albus, or the Whites; with a detail of the opinions relating to it, of some of the most distinguished authors during the last* 170 *years, a notice of the peculiar appearances of the discharge, and an attempt to connect it more directly than has hitherto been generally done, with inflammation of the vagina, cervix, and lining membrane of the uterus. To which are appended numerous illustrative cases.* By WM. C. ROBERTS, M.D., Fellow of the Coll. Phy. and Surg., Lecturer in the Spring Course of the Assoc. for Med. Instruc. of said College; and formerly Physician to the Northern Dispensary.

(Continued from last Number.)

PART II.—We come now to consider the peculiarities of the discharge which constitutes in popular parlance the "whites," and in medical nomenclature the affection called "Leucorrhœa." It is admitted by most observers since the time of Morgagni, that this proceeds both from the internal surface of the vagina, and from that of the uterus. The opinion of authors is divided as to the comparative frequency of the two; but since the introduction of the speculum into practice, the reader may rest assured that the vast majority of those females who apply for medical aid, seek relief against that form of it which exists in connection with engorgements and congestions of the neck of the uterus and a vascular state of its internal mucous membrane, rather than against that which comes solely from the inner surface of the vagina, the opinions of Dewees, Locock and others to the contrary, notwithstanding. We are very far from considering vaginal to be the commonest form of Leucorrhœa. It is very rarely that engorgements and ulcerations of the neck exist, without a morbid increase of the secretion of the internal lining membrane of the uterus, although this, as well as simple increase of the muco-follicular secretion of the vagina, is certainly possible. We have observed that by writers, the leucorrhœal discharge is said to be watery, glutinous, transparent, mucous, purulent, sanguineous, liquid, ropy, glairy, puriform, turbid jelly, sero-caseous, creamy and flocculent, sero-sanguineous, albuminous, semi-transparent, grey, opake and streaked. In color, white, light or pale yellow, greenish, bluish, blackish, brownish and grey. Of these varieties we are enabled to acknowledge only the *transparent or colorless*, like that which escapes from the nose on a cold day, from the urethra under venereal excitement, from the bronchial mucous membrane mixed with, and white from the presence of air, a distinction noted by Clarke; the thin, viscid, milky, starch-like, or as we shall denominate it, the *amyloid*, which is always follicular, coming from the cervix of the uterus and vagina, mixed perhaps with some of its transparent mucus; the yellowish or greenish *puruloid* seen lying in the fundus of the vagina, perhaps discolored by the presence of blood; the perfectly transparent, albuminous ropy jelly which escapes in trembling tenaceous masses from the os, sometimes amber-colored by blood, sometimes semi-opake like the white of egg which has undergone very slight coction, sometimes streaked, like the bronchial mucus, with whitish or yellowish streaks; sometimes, though rarely, even more yellow, like the puruloid. Such are the only discharges that we have seen in cases of true leucorrhœa, whether vaginal or uterine. Of the watery, bluish, blackish, and grey discharge spoken of, we know nothing: never have we found it offensive, and never when proper cleanliness was observed, seen it acrid, although under these circumstances we have several times known it communicate gonorrhœa to the male, and as that of coryza does, it inflames the part over which it passes. (Lisfranc.) Never but once, in many cases, have we seen a purulent discharge from the vagina; in this case the speculum discovered a large circular *syphilitic* ulceration of the neck of the uterus, its surface yellow from a deposit of coagulable lymph, from whence, since the vagina was healthy, and the uterine discharge, semi opake and yellow only at a distance, the thin purulent fluid doubtless was furnished, which as it healed has given forth a discharge in the language of the patient, "more like the whites." Once only have we seen *true pus* escape in a considerable quantity from the os uteri on the introduction of bougies into its cavity, doubtless from an abscess communicating with it, in the walls of the organ. [V. Ashwell, p. 129 and cases.] Many authors agree in asserting that the leucorrhœal discharge becomes puriform, purulent, or consists of true pus. (Morgagni, Clarke* (but his seem to depend on gonorrhœa), Lagneau, Locock, Ferguson, Bennett, Ashwell, Boivin and Dugès and Churchill call it "puriform," but seem to mean "purulent," and Lisfranc "sero-purulent)." Many others, whom we have cited, do not, however, assert the secretion of pus. Setting aside the case of syphilis and that of abscess, we have, as before observed, never seen true pus in the vagina. In bad cases of leucorrhœa, with *or without even* ulcerations of the neck, the mucus which bathes the neck looks thin, yellowish, or greenish, and very like pus, when accumulated in quantity at the bottom of the vagina. But on removing it with a sponge and extending it, it loses this character and appearance, and seems to be only the transparent, or semi-opake gelatinous mucus from the uterus, streaked with whitish striæ or flocculi, sometimes almost as uniformly white as lard, and not miscible with water.

We were at first disposed to think that some of the yellowness depended upon the admixture of pus from the surface of the cervical ulcerations, or at least of coagulable lymph issuing therefrom: but of this we never could convince ourselves, and doubt whether the simple ulcerations and excoriations of the neck, secrete anything save a transparent mucus from the exposed follicles on their surface. We have seen it too, though very rarely, when there were no ulcerations, and suppose it always to be, in great part, uterine. Certain it is, however, that it exists in the worst cases of the disease, and the stain which it causes on the linen, oftenest indicates that the affection is aggravated, and the probability of their existence. Let us interrogate the authorities on the subject of the discharge. "Generally," says Morgagni, "the uterus is the source of fluor albus." Pus is discharged when ulceration has taken place either in it or the vagina. Serum, or a variously colored secretion, is usually formed when the inner surface of the uterus is affected. 'In one case, it contained rather thick whitish matter: ditto in another." Again: "*the cavity of the uterus* was filled with a secretion of a white color, *inclining to a yellowish or greenish hue;*" in another, "from the os and cervix a thick and *almost puriform* mucus issued;" in another, "a thick whitish matter which must have come from the corona of the os and cervix;" in another, "the cavity of the fundus contained a tea-spoonful of yellow serum." Here we have yellow matter, not pus, coming from the *uterus*. Boehmer found the *interior of the womb* and vagina covered with a thick *yellow* mucus. "The discharge," say Boivin and Dugès, "of metritis, yellow, greenish or *puriform*, stains the linen of a greenish yellow color when it dries, and stiffens it like starch. As the disease abates, the discharge becomes white and lacteous; sometimes mixed with slimy matter, almost transparent" (the amyloid follicular and natural mucous secretions of the vagina only). "When the passive mucous discharge is abundant, it stiffens the linen as it dries, and generally stains it *greyish*, deepest at its borders." Lisfranc asserts that the "sero-purulent whites from the uterine cavity inflames by its acridity the posterior lip and vulva." Recamier speaks of the opake, whitish, yellowish product of inflammations of the lining membrane, flowing from the uterine orifice." All these quotations go to show the probable correctness of our assertion, that the yellowish discharge seen in the vagina is puriform or puruloid mucus, and not true pus, and that it comes from within the os, and is independent of ulceration.*

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* This author, for want of a speculum, and the same remark applies to many others, knew nothing of the secretion from within the uterine cavity, and could not distinguish the origin of discharges per vaginam.

Respecting the stain upon the patient's linen, all mucous discharges from the genital organs stiffen the linen more or less, as far as we can learn; the amyloid less; the yellowish mucus more. Ninety-nine in one hundred women, when asked the color of the stain, answer "yellow;" a few "whitish." Now, it is necessary, as Doct. Dewees says, to be very particular in our inquiries respecting the quantity and appearance of these discharges, to avoid mistakes. By "yellow," women often mean the very faintest hue of the color, a stain in fact almost of a dead white, and offering yellowness only when examined by a side light. They even apply this term to the greyish stain of the follicular secretion of the vagina, and inasmuch as depth of yellow color is, as Boivin and Dugès assert, a test of the activity of uterine phlegmasia, much of the necessity for insisting upon a speculum examination will depend upon it. The amyloid follicular secretion of the vaginal and cervico-uterine follicles, stains, as we have said, the linen greyish, or like starch, or much as does the semen of the male. The transparent, or slightly opake mucus from within the os, gives to linen a smooth, slightly stiffened spot, which at first looks of a dead white hue; when held slantingly, has a dead, very faint yellow hue. On exhibiting a napkin so stained to two or three females, all of them pronounced it "yellow." The deeper its color in the vagina, the stiffer is the linen, and the deeper is the yellowish or greenish stain, which then certainly does very much resemble that produced by pus from an ulcerated surface. More extensive observation, however, is necessary to establish this point, and the microscope, by detecting, or not, pus globules in the mucus passed, would easily set at rest the question of its existence. The amyloid vaginal secretion is said by women to be "milky or thin;" the uterine mucus to be "thick;" these expressions then become useful guides in the diagnosis; but we must know how to interrogate the patients minutely to avoid error. We hear much said in books of the profuseness of the discharge. This applies probably to the thin follicular vaginal secretion, which may be very copious; but we have very seldom seen women who thought it necessary to wear napkins, though several have complained, among the other incommodities of the disease, of the state of their linen. On one occasion, we were several times presented with considerable quantities of the uterine gelatinous secretion, preserved on pieces of linen cloth for our inspection. Still we cannot help suspecting that there exist in most cases, other and better causes for the serious "debility" so much insisted on by authors, than the amount of the discharge. Cases such as have been mentioned by Ashwell, Colombat and others, have not presented themselves to us.

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* We have, at this moment, a gentleman under our care who has a chronic white *mucous* discharge from the urethra, the consequence of urethritis, which, when nearly discharged, makes on his linen a stain precisely like that of water, only less diffused. When dried recently it assumes a greenish yellow hue, and stiffens the linen, exactly resembling the stains seen on that of women having leucorrhœa.

If the catarrhal affections of other mucous membranes than that of the vagina and uterus be referred to, a certain support will be found to be given to the general non-secretion of pus from these inflamed surfaces. All, when seriously inflamed, do indeed secrete pus, but rarely. Thus at the commencement of otirrhœa, we find the discharge to be first serous; next muco-purulent, greenish or yellowish, but pus, strictly speaking, is of rare occurrence. Every one is familiar with the fact that on a very cold day there escapes from the mucous membrane of the nose, an abundant and transparent mucus; and that in coryza, as the disease advances, this, which is a mere increase of secretion from simple irritation of surface, becomes more consistent, vitreous, white, greenish, yellowish, and opake. But true suppuration is very rare. This, when fœtid, constitutes ozœna, which is oftenest the result of ulceration, whereas simple ulceration of the internal membrane of the uterus is a fact admitted rather than demonstrated. The close resemblance between coryza and leucorrhœa has given to the latter one of its synonyms, *uterine catarrh.* Equally great is that between it and bronchitis. We find Dr. Stokes enumerating the secretions from the bronchial mucous membrane, when in a state of irritation, as follows; 1st, transparent mucous, 2d, opake mucous, or albuminous, 3d, muco-puriform, 4th, puriform, and 5th, serous. The exact analogy between these and the discharges from the uterine mucous membrane, is at once apparent. "An absolutely puriform (Qu? purulent) expectoration," observes Dr. S., "in bronchitis is rarely seen indeed." Likewise, in dysentery and cystirrhœa, in ophthalmia and urethritis, though the existence of suppuration cannot be denied, its occurrence is nevertheless rare, and requires for its production a very high degree of inflammatory action. It may, in truth, be said of the mucous membranes generally, except when the inflammation is due to a specific cause, as in gonorrhœa and glanders, that it is rarely sufficiently intense to produce this result, and certainly it is very uncommon to meet with a form of leucorrhœa acute enough to result in this way. In the many examples which we shall present to the reader, he will find none which invalidate the truth of this assertion. But while analogy teaches us this fact, it compels us also to admit that, as in coryza, a simple exaltation of secretory action, from irritation of the extremities of the sentient nerves upon mucous surfaces, may occasionally lead to the production of one form of uterine catarrh which is not inflammatory (Copland, Burns, Boivin and Dugès). How far such a discharge depends upon a condition of the system, or the parts purely asthenic, may be questioned.

Having then made this reservation in favor of a rare form of vaginal and uterine flux, the former of which we suppose to be always transparent mucous, watery, or amyloid, from the many follicles which beset the cervix uteri and vagina, the latter clear and albuminous, or at least very slightly opake, since we cannot suppose in a form of discharge not inflammatory, anything more than an increase merely of the natural secretion of the part, we come to inquire, what, according to the best evidence that can be obtained and the arguments which analogy affords, is the true pathology of all other forms of leucorrhœa. To this we reply that it is due to a state of high congestion and irritation, or of actual inflammation of one or other, or all of the tissues which compose the structure of the uterus and vagina. This, with an exception already noted, is the view taken by Boivin and Dugès, and entirely that of Lisfranc. We suppose that when an abundant, thick, semi-opake, striated gelatinous mucus is distilling from the os, presenting, when accumulated in masses, a yellowish or greenish *puruloid* appearance, the mucous membrane of the uterine cavity is of a deep red color from sanguine congestion, or inflammation, softened and possibly even ulcerated, whence is secreted, as from every other inflamed mucous surface, mucus, coagulable lymph, and perhaps pus.

Such are the results which pathological anatomy has established, and they are confirmed by a dissection of our own. In this case, both lips were superficially ulcerated. The redness commenced just at their junction, and extended, of a faint color, a little way within the cavity of the neck; for about half an inch beyond this, the color was a dead white; the redness then recommenced and extended to the very fundus, where, and on the left side, it was most vivid. The redness was patchy and punctuated and very bright over a small mucous polypus nearly in the centre of the uterine cavity. The pale red surface first spoken of, was observed, by a lens, to be rough and granular, and was covered by transparent adherent mucus. The mucous membrane of the uterine cavity did not appear altered in any way other than in color. We have seen the same appearances in three other cases, and in one the uterine mucous membrane was in a state of pultaceous (inflammatory) softening. The ovaria, in the first case, contained numerous injected cysts, and the tubes a bloody purulent fluid.

We suppose that when the thin milky or starch-like (amyloid) mucus is escaping in abnormal quantities from the vagina, the mucous follicles, crypts, or glands of the vagina and cervix uteri, are in a similarly congested, inflamed and irritated condition. But this is not all. Although it is possible that a milder form of these affections may exist without any change of structure appreciable to the eye, we believe that the body of the uterus will oftenest be found to have become engorged under the influence of the fluxionary movement, enlarged, tender, indurated; its neck to be swollen, hot, tender, of a deeper red than natural; the seat of superficial ulcerations, more or less numerous and extensive, and presenting certain differences in appearance; the lips of the os tincæ, one or both, to be enlarged and engorged, the os itself gaping and red within, the vagina puffy, relaxed, and more or less extensively reddened. That all the signs of a metritis, acute, subacute or chronic, of the neck at least, will, in short, in cases of long standing and severity, be exhibited, of which the characters of the discharge constitute an important diagnostic sign, but which the *speculum alone* can reveal in all its extent, of which it alone can ascertain the true nature, and which should, therefore, in all cases of whites, both for the sake of physician and patient, be resorted to. We venture to say that by neither will its use ever be regretted.

Leucorrhœal discharge, then, is rarely a disease per se; it is rather a symptom of a vaginal or uterine phlegmasia (we exclude all other organic diseases of these parts whereof it may be, and often is, symptomatic), assuming different forms, which, though not always, are oftenest combined. The reader will find these views fully corroborated by the quotations from the best and ablest authorities, with which we have furnished him, and the cases which we shall shortly hereafter present to his notice. We shall not dwell upon the subject, but proceed to consider a remaining question in the pathology of the affection. It relatês to the manner in which leucorrhœa arises. Does it cause the engorgement, or the engorgement it? Is the engorgement secondary to the ulceration? We have already declared our opinion that the ulceration is not the cause of the leucorrhœa. Lisfranc says, that the inflammation may commence in the vagina and extend to the uterus, the uterus then becoming engorged. In many cases it commences by engorgement of the body of the uterus, and then that of the neck and the vaginitis are secondary to it, and the leucorrhœa is its symptom. From the fact that the uterine leucorrhœal discharge inflames the lips of the os, this mode of progression seems most natural. Lisfranc maintains that ulceration causes and keeps up leucorrhœa. Doubtless it keeps up congestion, and that, in turn, keeps up the discharge. More doubtful is his statement that leucorrhœa may cause ulceration and engorgement: this can be only very partially true. "Non-carcinomatous ulceration of the uterus either *causes*, keeps up or increases hypertrophy." Aphthous or other circumscribed phlegmasiæ of the epithelium of the neck, as in the mouth, or the ulcerations resulting from injury, will determine an afflux of blood to the part and cause engorgement. Generally, however, we should suppose, in conformity with what elsewhere occurs, congestion is followed by ulceration, which is one of its terminations; then, indeed, the new irritation may cause a new afflux to the part, and keep up or increase it. In this way, we consider ulceration to be oftenest consecutive to engorgement, and not its cause. Upon this subject we fully participate in the opinions we have quoted from Gosselin and Bennet. But these are niceties of very little moment, provided we know that such engorgements and ulcerations may exist, and how to detect and to cure them when they do.

If the pathological views which we have now hastily offered, and for the truth of which we refer to our preceding pages and the cases we are now about to offer, shall have found favor with the reader, he will with us acknowledge that to do this there is but *one way*, and the sooner it becomes general, the better. If these remarks should contribute to that desirable end, they have not been written in vain.

It is very remarkable, when we consider the close analogy of the uterine mucous membrane with that of other mucous surfaces, that its true pathology should have been so long unsuspected, and the disease so erroneously attributed to a debilitated condition of the system, and of the part concerned in producing the discharge. And this very analogy supplies a strong corroborative proof of the correctness of the opinion we have advanced; for while we admit the occasional increase, even to a morbid degree, of the natural secretions of parts, unconnected with inflammation, yet when these have presented characteristic changes in their appearance, and even when they have not, and have been attended with the evidences of local disorder, there has never been any hesitation in referring them to a highly irritated or inflamed condition of the secreting membrane, by which the natural discharges were increased or modified. But with respect to leucorrhœa, this, until very lately, has not been the case, and authors have blindly followed each other in attributing it, in defiance both of fact and analogy, to "weakness," until the very terms of "whites" and "weakness" have come to be synonymous. But, thanks to the improved modes of diagnosis and a sounder philosophy, this long-cherished error must, ere long, be abandoned, and the dependence of leucorrhœa on structural changes, even where great constitutional debility exists, conceded to be one of the best established facts in pathology. We are to remember in this latter case, first, that the debility may supervene upon the long continuance of a local irritation, which may indeed have had some agency in inducing it, less by the profuseness of the flux than of the sympathetic irritation of the organic lesion upon the nervous system and the functions which it controls; secondly, that it may depend on causes wholly unconnected with it; and thirdly, that, in the language of Locock, "whenever the general health is broken down, and much constitutional weakness occasioned, local disease is often the result." The causes of uterine affections are so numerous, so constantly active, so difficult to be avoided, that it cannot be wondered at that this organ should so often be the seat of its occurrence.

PART III.—Having now fulfilled the intention expressed to consider in our second Part the subject of leucorrhœal pathology in particular, as connected with certain morbid states of the female genitals, avoiding, however, any detail of these as belonging to another part of the study of uterine diseases, and to state the results of our observations as to the peculiarities of the discharges which occur in it, and the data which they furnish, we propose to furnish a detail of the cases which have fallen under our own observation, and upon which our remarks are founded, as well as some from other sources, which will, we trust, be found fully corroborative of the conclusions at which we have arrived. We shall confine ourselves chiefly to the pathological appearances and those of the discharge.

CASE I.—C. Mitchell, wife, æt. twenty-six. Child four months old—leucorrhœa three years and getting worse. Since the birth of last child much heat in bottom of belly, small of back and *intra vag*. Discharge stiffens linen, and stains it yellow, soiling it so much in a day as to render it unfit for wear; after much exercise escapes as freely as catamenia. *Spec.* on Sep. 27, 1843. Os uteri wholly encircled by an ulcerated and granulated surface of at least half an inch in breadth, of vivid red color: the granulations fleshy, distinct, large like those of a healthy ulcer: clear, tenacious mucus (*albuminous*) hanging from the os uteri, and bathing surrounding parts. Within the os externum, the thin milky (amyloid) follicular secretion exists in considerable quantity. Caustic to ulceration and within the os. Oct. 3d. Less discharge. Tenacious muco-*puruloid* fluid (yellowish in speculum, opake when removed), around and *within* the os. Ulceration of upper lip healing from circumference to centre. Oct. 13th. Less whites—stain yellow, though less than before. Extent of ulceration continues to diminish and granulations to disappear: that of posterior lip divided by a deep fissure. Reapplied caustic. 23d.—Catamenia since last visit. No mucus in speculum, ulceration of lower lip cured: anterior, red, rough and swollen for two or three lines breadth, a circle of puffy violet redness, elevated, not granulated, around the margin of the os. Reapplied caustic. Oct. 31st. A very little redness around os: a little opake uterine mucus *in vag.*; very little discharge. Nov. 7th. On pressing back the margin of the posterior lip of the os, a red fungus of the size of a pea is seen, the only ulcerated surface. Anterior lip pale rose color: posterior lip a little darker. Still a little congestion of neck—opake mucus between the lips of the os. Less yellow stain and stiffening of linen. Had no discharge for ten days: it then returned, but resembled "the white of an egg." Reapplied caustic. Dec. 6th. Fungus red and smaller, os wide and irregular; on first introducing speculum, a gush of opake mucus takes place from the os: and there is a good deal around the neck. Introduced caustic one inch within the os. Very little leucorrhœa. Mrs. M. did not return, but being seen by Dr. Crane six months afterwards, said she was quite well. This was a case of uterine leucorrhœa: of muco-hysteritis, congestion and ulceration of the neck, probably exaggerated by the last delivery six months before. It was successfully treated by the alterative action of the caustic, and fully bears out, as it regards the condition of parts, the stain of linen, character of discharge, &c, all that we have insisted on previously. As the inflammation abated, we see the opake mucus becoming clear, transparent, and less in quantity. In this woman the introduction of the caustic intra orem, was followed in a few hours by sanguineous discharge, sometimes continuing for some days. This by patients is often considered as menstruation.

Case 2. Bridget Coolachan, 30, wife. Whites for one year—constantly for last six months. Discharge white, stains linen yellow, stiffens it, and is with difficulty washed out: profuse. *Speculum:* Vagina relaxed, deep, capacious, and contains much amyloid mucus. Neck pale rose color: os a remarkably long, gaping and irregular slit. For one fourth of an inch all around it is a deep red line of ulceration continuous with the cavity of neck. Much opake albuminous mucus between lips and in vag. Uterus low.

A case of uterine leucorrhœa, seeming to show that the ulceration of the neck followed the inflammation of the internal mucous membrane, and that it and congestion of the neck may exist separately. Cured by caustic.

Case 3. C. Gonsalves, wife, 27. Married three years—whites ever since; no family—a miscarriage soon after marriage, since when worse. Discharge thick, bloody, staining linen yellow and stiffening it. *Speculum:* At os extern. vag., considerable *amyloid* mucus. Neck of uterus long, swollen and shining, like the glans penis when erected, decidedly vascular when compared with the vagina. An ulceration of vivid red color, contrasting strongly with surrounding parts, half an inch around the os and passing into it. Much opake mucus hanging from os uteri, and in upper end of speculum.

Uterine leucorrhœa: muco-hysteritis, congestion of neck, ulceration. Here it is difficult to say which preceded the other in the order of development.

Case 4. Mrs. Rest, 31, wife. Has had leucorrhœa for eight or nine years, and been variously treated without relief. For the last two weeks the discharge has been unusually profuse, and has a fetid odor: is nursing and had the catamenia seven weeks ago. *Per vag.*, the os is felt to be very open, spongy, soft, and to present a remarkable feeling of roughness : the granular surface large and divided by tangible sulci. *Per spec.:* For at least half an inch around the os, the color of the neck is of a brick red. It presented a broken surface formed by prominent fungoid granulations, the size of small shot, and intersected by sulci. On the right angle of the os are two fungi, as large as buck-shot, separated by a deep fissure which allows of the eversion of the lower lip, on which, passing into the os, the same granulated character prevails. The neck does not feel tumid, nor the body enlarged. July 17th. Vag. full of thick tenacious uterine mucus—upper lip of neck very red, granulated and bleeding. It resembles the conjunctiva in a state of chronic inflammation, and has small vessels running over it. App. Nitr. arg. 21st. Same ; thick mucopuruloid mucus *in fundo vag.* 24th. Leucorrhœa slight and opake. To the touch, lips gritty : ulceration of lower lip almost well, and of upper, less extensive. Granulations smaller and less livid, and sulci nearly obliterated. July 29th. Menstruating. Aug. 7th. Both lips the seat of a rather brick red fungous ulceration ; much opake puruloid mucus in vag. Sept. 12th. "Unwell" since. An increase of whites preceded it : less since than in a year. Stain less, but stiffening of linen more—color white. *Speculum:* The os more easily attained, ulceration less broad, and less vividly red. Only some amyloid mucus in vag. Did not return.

This case of uterine leucorrhœa was of long standing, and the ulceration had assumed the chronic form. She had never been examined, either by touch or the eye, although the case was one of those which fully justified a resort to the latter means, and the touch enabled us, as it has often done before, to form some idea of the condition of the parts, of which the use of the speculum alone could declare the exact nature and extent. We note the varicose condition of the neck (Lisfranc cit.) and the increase of the leucorrhœa during the menstrual molimen. By the speculum alone, could this ulceration probably ever have been cured, and to its use, notwithstanding the senseless prejudices of Doctors Copland and Waller, she would doubtless, had she continued her attendance, have owed an entire recovery from her disagreeable malady.

Case 5. E. Jenkins, 29, wife. Suffered from leucorrhœa since birth of first child. Stain yellow or green. *Speculum.* Inner surface of lips of os very vascular and ulcerated to a considerable extent. Opake white mucus intra orem. Sept. 11. Ulcerations healing ; 19. do. looking very red, tenacious opake mucus between lips of os. In the vagina looks puruloid, but when brought away on the sponge is only mucus, like that expectorated in bronchitis. Vag. excessively relaxed. 25. No mucus in vag. ; ulceration of lips seems to have nearly disappeared. Oct. 19. Return of leucorrhœa for some days—stain yellow ; os encircled by ulceration. Nov. 1. Leucorrhœa slight ; upper lip red, but sound ; upper half of lower presents a red fungous ulcerated surface, bleeding on the slightest touch. Nov. 6. Slight ulceration and bleeding of lower lip; follicular discharge only in the vagina. 27. A very little redness on lower lip, bleeding when touched. Did not return.

Case 6. Mrs. Carey, æt. 40, wife. Has "whites" badly—stain yellow. *Spec'm:* Neck much enlarged ; posterior lip especially, and will not enter the speculum (Ricord's). In a state of hard engorgement, and bleeds but little when scarified. On the upper lip many small red points. The os encircled by an ulceration which looks deep and concave, bleeding and fungous, and covered with clear tenacious mucus.

Ulceration chiefly on lower lip; of a pink purple color. Much muco-puruloid fluid in vagina. A case of muco-metritis, with hard engorgement of the neck. The "points" were probably inflamed mucous follicles.

Case 7. Marg. Spencer, wife, æt. 35. Vagina excessively relaxed; anterior wall and uterus prolapsed. *Spec'm:* Oct. 28. Lips of uterus short, of livid blue color, for two lines around and within the os ulcerated and granular; some opake puruloid white mucus in vagina. Nov. 2. Posterior lip natural; ulceration confined to anterior lip, three lines in extent and semi-circular; bleeds on touch; within the os, the posterior lip is ulcerated and granular. This lip is much the larger of the two. A little above the margin of the ulceration of the anterior lip is a fungous, circumscribed red spot, as large as a pea, apparently the commencement of ulceration. Applied caustic, which gave much pain. Nov. 15. Neck small and of pale rose color; around the edge of the os a mere line of ulceration, of deep red color. Clear albuminous mucus hanging between the lips. Dec. 29. Ulceration healed; neck perfectly healthy: no mucus of any kind visible. The color of this neck, and that of a patient with prolapsus examined to-day, were of a faint bluish rose color, very smooth, lips of nearly equal size, os a gaping slit half an inch wide; no mucus in the vagina of either. A case of uterine leucorrhœa from muco-metritis, with granular ulceration and slight engorgement of the neck.

Case 8. S. McGuire, æt. 22. Leucorrhœa for more than two months, of whitish color, sometimes streaked with blood and staining the linen yellow. *Touch:* Uterus low and inclined backwards; anterior lip swollen, hard and congested to the junction of the vagina; the finger detects an ulcerated surface. The posterior lip is shortest; fissured and rough on its edge. Nov. 17. *Spec'm:* Both lips swollen, red and congested, inverted and irregular; a line of redness just within the lips of the os; it bleeds on being wiped. A considerable quantity of thick white mucus in vag. 23. There is an ulcerated bleeding surface around the os on both lips; it extends high up on the anterior lip, and has a distinct, elevated red edge. The anterior lip so fills the speculum as to exclude nearly the lower one. In the upper part of the vag. some opake mucus of a greenish color, appearing white when examined on the sponge (*puruloid*). Scarif. anterior lip ℥ ij. Nov. 27. A good deal of opake mucus in vag. Neck pale, very hard; owing to the inversion and elongation of anterior lip, cannot get the neck fairly within the speculum so as to see the ulceration distinctly. A bad case of engorgement (inflammatory) of one lip, with muco-metritis and ulceration. The husband of this woman had the symptoms of a "clap," a circumstance we have often seen in connexion with simply mucous discharge in the female, which is borne out by the occurrence of purulent ophthalmia in the newly born child, and which has led us to suspect that simple gonorrhœa in the male has no other origin than the acrid nature of this simple blenorrhœa of the female. We have more than once detected nothing else in examining the suspected female, in such cases, and all are aware of the perfect innocence, and sincere regret with which, to their own manifest disadvantage, women unsuspectingly communicate this disease to the persons with whom they cohabit. (V. Ashwell, Am. ed., p. 147, for a case.)

Case 9. Æt. 60. *Leucorrhœa for five weeks; never before in her life.* It was at first white; became yellow at the end of a fortnight, and now stains the linen yellow and stiffens it. *Spec'm:* Neck hard, swelled; lips everted. *Red* as scarlet from punctuated inflammation. It is shining and irregular on its surface, and bleeds on the slightest touch; hence must be abraded or engorged; a string of opake mucus, looking like pus in the speculum, hanging out of the os; more in the vagina. The vagina is relaxed, generally pale, though here and there injected, offering a singular contrast with the scarlet redness of the neck. In a few days the epithelium of both lips was completely removed, and the surface fungous, raw and bleeding almost to the junction of the vagina. Little or no mucus in vagina. A very bad case of inflammatory (sanguine) engorgement of the neck, *soon followed by ulceration*, which we take to be the natural order of sequence, with muco-metritis, as evinced by the *puruloid* character of the discharge. We see in this case how speedily the phenomena which constitute the disease, may develope themselves, as in all other mucous inflammations, in a person otherwise and previously in good health.

Case 10. Emma Brady, widow, colored, æt. 33 (?) mother of six children; youngest eight years old. Had leucorrhœa ever since. Discharge excessive, greenish or yellowish, staining linen yellow and stiffening it much—streaked often with blood. General health bad (fever, dysmenorrhœa and vomiting, pain, &c.), but does her duty as cook in a family. *Spec'm:* The entire surface of the neck is one irregular, fungous, bleeding ulceration, even to its junction with the vagina, the whole extent of which could not be seen with the speculum. A good deal of *puruloid* mucus in vag. April 10. Ulceration somewhat less, but presenting same appearances. By *touch* we cannot feel much lower lip, and the neck itself is considerably shortened, irregular, very hard, and at one spot adherent to the vagina. This was probably a case of carcinomatous ulceration, whether consequent upon simple engorgement we cannot decide; but, at any rate, it proves the fact that the leucorrhœal discharge is the effect of a co-existing lesion of some sort, not a disease per se, which lesion the touch and speculum are both needed to detect and classify.

Case 11. J. Murphy, æt. 23. A stillborn child two months ago. Has had leucorrhœa ever since she was 15, worse ever since the birth of her first child. Constant, but more profuse just before and after menstruation. *Spec'm:* Anterior lip enlarged and somewhat congested. The whole neck of a darker red color than natural. Immediately around the os and extending within it, is an abraded surface which bleeds on the touch: the ulceration terminates abruptly in the sound mucous membrane. Neck not tender. Streaming from the os is a large quantity of clear transparent mucus; around the neck in the vagina it has the yellow, puruloid character, which on the sponge is seen to be merely the opake white mucus. (Drs. Crane & Markoe.)

Case 12. Maria Cahoone, æt. 30. Leucorrhœa since 1832, for last six months incessant. *Spec:* Neck much enlarged and could not be embraced by the speculum. Around the os for half an inch, a well defined abrasion, terminating in sound mucous membrane, and strongly contrasting with it in color. Opake white mucus in the os. Vagina pale red color and much relaxed; uterus prolapsed. (C. & M.)

Case 13. M. Kennedy, æt. 32. Leucorrhœa for two years past, not constant; generally appearing a week before menstruation and then disappearing. *Spec:* Whole neck engorged, and so large as not to be embraced by the instrument. The whole neck in a state of complete abrasion, extending within the os, and bleeding on the slightest touch. The anterior lip is so large as of itself to fill the speculum. Around the os large fungous granulations of a deep livid red color, of the size of buckshot. Ulceration also seen on a fold of vagina in front of the neck. Between the lips of the os, and bathing the neck, a considerable quantity of thick tenacious opake mucus, looking yellow in the mass. That lying in the lower part of the vagina and os externum vulvæ, is the thin, milky follicular discharge, readily washed from the finger, mixing with water and rendering it turbid.

This well marked case is the prototype of uterine leucorrhœa, and fully establishes all that has been said in the preceding pages, both relating to the lesions and to the discharges.

Case 14. Amelia Irons, æt. 28, unmarried. Very copious leucorrhœa for 8 years, wears napkins; sometimes thick, "like matter," at others albuminous. Stain more or less yellow. *Spec:* Feb. 26. The vagina contains only amyloid follicular mucus. The neck is very small and short. A trace of ulceration around the os. In the vagina near the neck, are numerous enlarged mucous follicles (papillæ) surrounded by areolæ of inflamed mucous surface. They existed as far as could be seen around the neck of the uterus and fundus of the vagina. Vagina not red. Mar. 11. A quantity of thick yellowish or greenish secretion in the vagina, which when removed upon the sponge is of the consistence of cold boiled starch, and quite white (follicular). The ulceration exists on the neck around the os, and passing into it: the circumference of the os seems eaten round as if by cancer. The papillary appearance around the neck no longer visible; some papillæ still on the anterior wall of the vagina. The entrance of the vagina is dry and rough, bleeding easily, and the introduction of the speculum is difficult and painful. Mar. 25. Neck and os perfectly healthy, no mucus in the os or fundus vaginæ; a good deal of amyloid secretion in the vagina. The hypertrophy of the mucous papillæ of the vagina, we saw once before; they, set closely together and much developed, occupied a space upon the anterior surface of the vagina of about two square inches, and to the touch were hard and rough. The follicular secretion is necessarily much increased in consequence.

Case 15. Julia Looney, æt. 27, widow. Leucorrhœa for two weeks past constantly. By the *touch*, a marked engorgement of the posterior lip is felt: by the *speculum* it is seen to be half as broad again as the anterior, and both are redder than natural. The edges of the os are abraded and bleed upon the touch. Between the lips a muco-puruloid fluid. Scarification July 24th. Aug. 2d. No redness or congestion remain. The vagina and external surface of the neck are besmeared with amyloid inspissated follicular mucus. The edges of the os are irregular, but smooth: on their inner surface when separated seem rough and red.

Case 16. (Dr. Crane.) Julia D. single, æt. 22. Uterus low and tender on pressure. *Speculum:* Immediately around the os for an extent of a line, a circular erosion of the epithelium, which extends into the cervix; the neck of usual size, and of deeper red color than natural; semi-transparent mucus between lips of os, and in upper part of vagina.

Case 17. (Dr. C.) Mrs. W. Dysmenorrhœa and leucorrhœa of ten years' standing. The uterus contains a well marked isolated tumor of the posterior wall (see N. Y. Jour. Med. and Surg., Oct., 1844), of the character of true *tumor*, and not simple hard engorgement, which it is easy to mistake for it. The neck, *not ulcerated or abraded*, is extremely red, though very small, and semi-transparent fluid in considerable quantity is escaping from the os. A case of uterine leucorrhœa, *unattended* *by parenchymatous congestion*, ulceration or abrasion, which, however much they may contribute to entertain each other, are not, since each occurs separately, always to be considered in the light of cause and effect. Hàd the isolated tumor any effect in causing or in keeping up the leucorrhœa? the latter, probably.

Case 18. Lydia Smith, widow, æt. 30. Leucorrhœa. *Speculum:* Neck of natural size and color; an ulcerated and granular excoriation extends around the os for at least six lines in breadth, and passes within it. Slightly opake mucus issuing from the os. A slight case of muco-hysteritis, extending from within the uterus upon the surface of the lips, and forming superficial abrasion upon the part exposed to the irritation of air, contact, and the uterine discharge, but without parenchymatous congestion; the second form of the disease.* Caustic applied locally a few times, speedily cured her.

Case 19. Mary O'Neil, wife, æt. 25. Leucorrhœa for 10 years. *Speculum:* Neck pale and healthy; a little thick whitish mucus issuing from the os; a quantity of the "puruloid" in the upper part of the vagina, which is pale and much relaxed. A case of simple uterine leucorrhœa, muco-hysteritis; a true catarrh of the womb.

Case 20. M. Johnson, æt. 20, single. Leucorrhœa for one year; constant but increased before and after menstruation. The uterus is low, the cervix small and of too deep a red; opake mucus is streaming from the os; vagina healthy. With the exception of the slight vascularity of the surface of the neck, the same remark applies here as to the preceding case.

Case 21. Mary McLean, æt. 35, wife. Discharge has existed two months, *is "milky," leaves a colorless stain and stiffness on her linen;* the neck and os are beautiful rosy (pale), the anterior lip a little elongated and tender to the touch; the vagina is much relaxed and its wall is covered with amyloid secretion; no opake white or transparent mucus to be seen. Cured by injections of Nitr. Silv., gr. x to ℥i. We quote this case to show the coincidence between the color of the discharge and its stain, and the absence of any uterine lesion, except a little fullness of one lip; and would observe that, if there really be cases of *vaginal leucorrhœa from debility* of that canal, unaccompanied by structural lesion of it or the uterus, *this was probably one.* The condition of the anterior lip may have increased the follicular discharge.

Case 22. Lucy Sidney, æt. 20. Leucorrhœa ever since her child was born (16 months). Has been very copious, and presented a variety of appearances. *Speculum:* Whole vagina red and congested, *and bathed with the amyloid discharge.* The mucous membrane covering the neck, presents the same congested appearance; a clear transparent mucus escapes from the os; the introduction of the instrument caused considerable pain. This may be called simple *vaginitis*, which, by increasing the follicular secretion of the part, induces only a starch-like discharge. That from the os, scarcely more than natural in quantity, is transparent and albuminous.

Case 23. Mary Snyder, æt. 25. Had leucorrhœa one month before, and has ever since the birth of her last child, seven weeks ago. Yellow at first and very profuse; is now transparent and thicker, staining the linen yellow and stiffening it very much; a good deal of pain in the back and region of the uterus; worst at night, for which she takes laudanum freely. *Speculum:* Cervix large and very red; a large quantity of thick semi-transparent mucus issuing from the os; on the anterior lip an irregular surface, looking like an ulceration partly cicatrized and extending within the os. The cervix is tender to the touch (Crane and Markoe). A case of muco-hysteritis, with congestion, ulceration and vascular injection of the neck.

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* There are three. 1st, muco-hysteritis; 2d, ditto, with superficial abrasion; 3d, the same, with inflammatory engorgement of the neck and perhaps of the vagina. Each may exist singly or in combination with one or all of the rest.

Case 24. S. Link, æt. 34 years; married and nursing. Has had leucorrhœa ever since she was sixteen; has been worse since her last child was born; has been long under treatment for leucorrhœa and is getting worse; is in bad health and very despondent. *Speculum:* Both lips of the uterus very much swollen; both, the anterior particularly, of deep purple red color, as is also the whole of the mucous membrane of the vagina at its upper part; a great deal of muco-puruloid discharge, bathing the neck and proceeding from the os; no abrasion In a month afterward, slight ulceration became visible around its edges. An attempt was made to relieve this case by scarification, but the circumstances of the patient rendered it impossible for her to continue her attendance long enough. It was a very bad case of muco-hysteritis, with parenchymatous congestion of the neck, and intense vascular injection of its exterior membrane and that of the vagina.

Case 25. H. Green, æt. 20. Has had "whites" for 5 months. It is at times profuse, and attended with the usual symptoms in a high degree; much gastro-enteric irritation. *Speculum:* Neck swollen and very red; os open; semi-opake mucus escaping, and a large quantity of the "puruloid" in the vagina, which is throughout intensely red and excessively relaxed; no ulceration or abrasion visible. A very bad case of muco-hystero-vaginitis, with congestion of the neck. Never have we seen the vascular injection more vivid, nor the discharge more deceptive in appearance, yet it was, upon close inspection, only the opake white mucus. By repeated scarifications the case began to improve, after a very long while, when, owing to a particular circumstance, she discontinued her attendance.

The preceding cases, with two exceptions, occurred in the practice of the Northern Dispensary, and were observed in conjunction with our very zealous and intelligent colleague and friend, Dr. James Crane, jun., of this city; we shall next furnish a few additional ones from our own practice.

Case 26. S. Bailey, prostitute. This young woman was confined rather prematurely, and did not resume her vocation for at least two months afterwards. She has had leucorrhœa ever since. She complains of severe pain low down in the hypogastric region, increased by coitus, much walking, &c. The stain is yellow and stiffens her linen. By the speculum, no mucus is seen about the vulva, but the upper end of the vagina contains a good deal of thin muco-puruloid matter. The neck is much congested, of a livid red color, tense and shining, and very tender. The anterior lip most swelled and inverted, a narrow red abrasion encircles the upper edge of the os; the lower lip for a space of half an inch is cherry red, granular and bleeding. Pale yellow stains on linen, which, when dry and scraped with the nail, yielded a fine powder. She was slowly improving under treatment, when she departed suddenly for the south.

Case 27. Susan ——, æt. 20 years. Complains of leucorrhœa with few or no constitutional symptoms. Having acknowledged the fact to a young acquaintance of mine with whom she has lately formed a liaison not wholly platonic, I was requested to ascertain the nature of the discharge. This young person is by no means in the habit of promiscuous intercourse. *Spec.:* Much inspissated amyloid mucus in the vulva. The neck has the virgin character, but is rather tumid; it and the vagina adjacent are of a bright crimson color, from vascular injection; on the neck a good deal of thick starchy mucus. The discharge is wholly follicular. None of the opake white or puruloid is to be seen. The os is encircled by a narrow elevated rim of bright scarlet color; no discharge from it. This case improved under scarifications and the external use of caustic. The patient went into the country for some weeks, and returned quite well. It was a case of inflammation of the mucous membrane of the neck and vagina *only*, and gave rise only to the white mucous (or as we call it amyloid) discharge very properly considered as diagnostic of this condition of the part by Sir C. Clarke. It is one of the very few cases of leucorrhœa not uterine, which we have met with.

Case 28. A. T., æt. 27. Complains of very free bleeding per vaginam, every time she "sees her friend," with mucous discharge at other times. By touch the posterior lip is engorged, the uterus low and not tender. *Spec.:* The neck is large, its color natural. There is slight ulceration on the lower lip, passing up towards the cavity of the neck, and bleeding on touch; a quantity of tenacious mucus of a fawn color, almost like jelly, is pendulous from the os. On the second examination (the dates have been neglected in the report), the ulceration had rather extended, and some opake white mucus existed in the vagina. Blood still follows coitus. May 24th. Has abstained from coitus for ten days. Muco-puruloid fluid in the vagina; the ulceration on the lower lip is smooth and of a deep red. On passing caustic within the os, blood flows freely, and continued to do so for two days. The neck, since it was scarified, is rather smaller and rather "sore" on touch. June —. Ulceration extended on the lower lip, and within the os is a reddish body, which is either a little polypoid body or fungous excrescence of the inner surface of the lower lip, bleeding on the touch. Some muco-puruloid fluid in the vagina. June —. Ulceration of lower lip healed; fungous body diminished in size; no blood now follows coition. June 7. The neck is now so small as not nearly to fill the second size Lisfranc's speculum: the edges thin and color natural. A trace of ulceration on one angle of the os, bleeding on rough application of the sponge. A little transparent mucus between the lips of the os, and some opake white do. in vagina. At the next inspection, she was quite well. A case of uterine leucorrhœa, with engorgement of lip and hæmorrhage from the ulcerated and fungous surface, arising doubtless from the too frequent exercise of her vocation.

Case 29. M. A. D., æt. 30. Leucorrhœa. May 9. *Spec.:* Neck little changed in color; os wide, deep red inside, with puruloid mucus between the lips; no ulceration. By touch, neck feels hard and engorged, especially posteriorly, but not much enlarged and rather low. May 16. Os deep red—clear transparent mucus between the lips. July 31. Leucorrhœa, which had nearly ceased, returned. Neck pale and seemingly œdematous; posterior lip engorged: a thick mass of yellowish mucus hanging out of the os, extremely tenacious; inside of os red, and bleeding slightly when touched. June. Puruloid fluid in vagina. This simple case of muco-hysteritis with congestion of the neck, was again speedily relieved by cauterization.

Case 30. A. M., æt. 20. Mar. 17, 1844. Examining the labia of this woman affected with aphthous ulcerations, I observed a great quantity of opaque mucus between and upon them, and pale yellow chalky stains on the linen. *Spec.* The fundus of the vagina contained a good deal of thick mucus, at that distance "puruloid," but nearly clear upon the sponge, and streaked with striæ of a yellowish white, as we see in bronchial mucus. Around the os an abrasion as large as a shilling, bleeding on the touch of the sponge. Clear mucus between the lips of the os. Vagina, near the neck, much redder than natural. 23d. Ulceration less red and half the size ; very little discharge and stain whitish, a little thick follicular (amyloid) mucus only in vagina. This simple case of muco-metritis soon recovered.

Case 31. Mrs. B., æt. 23, married. Oct. 1844. Has had since May last, a yellowish discharge *per vaginam*, never any "whites" before. It has not been constant, but for two weeks has been so, and coitus is very painful. She looks delicate : has not very lately miscarried, and has carried conjugal enjoyments to an unsafe degree of frequency. To the *touch*, the posterior wall of the neck is hard, irregular, prominent and tender, but the engorgement is not circumscribed like the isolated tumor, to which it bears some resemblance. The uterus is prolapsed. *Spec.* Vagina pale and very much relaxed ; much milky fluid in vagina. The anterior lip of the uterus much swollen ; of a pale rose color, the edges of the os irregular ; all around it for the extent of an inch is a red abraded surface, bleeding when wiped. It was cauterized for a little distance upon its edges. A thin transparent mucus, streaked with whitish lines, is distilling from the os. The vagina is pale, the stain on the linen of a pale yellow like that of recent pus.

Case 32. Mrs. W., Sept. 17, 1844, married, æt. 20. Has had leucorrhœa for two years, and undergone a variety of treatment. States that she "makes Mr. W. unwell" occasionally, that is, causes in him the symptoms of gonorrhœa. The discharge leaves a pale yellow stain and is acrid ; patient never pregnant. The introduction of the second sized Lisfranc's *speculum* caused pain. The neck was small, turgid, its lower lip nearly covered by a fold of the vagina, which, as well as it, are of a fine bright pink color, inclining to red. The os is circular and very red inside, but no ulceration is visible. Here and there, small bluish and whitish spots are discernible on the smooth and shining surface of the neck. A thick mass of tenacious semi-opake mucus hangs from the os, and is with difficulty removed ; a quantity of the same in the vagina, but none of the follicular : the neck is very tender. 23d. Neck covered by a deposition of follicular secretion and in patches, of a bright red. A long string of tenacious, viscid, opalescent, albuminous mucus hanging from the os, which cannot be removed, and a good deal of the same in the upper part of the vagina. Scarif. Caustic ; T. Ergot. Oct. 5. Neck red, having some brighter spots on it ; upper part of vagina filled with a quantity of the semi-opake mucus which discharges from the os, with a long string extending from which it is connected, so tenacious as to be with difficulty wiped away. Stain on napkin, a pale yellow, not stiffening it much. Omit Ergot, which seems to do harm. Oct. 11. No mucus in the vagina, and only a small string of nearly transparent mucus, issuing from the os, but the lips and vagina are too florid. Oct.

31. A string of pearly mucus protruding from the os. Within the os, as seen by Charrière's four bladed speculum, in a very strong light, deep redness is visible, the neck and vagina of a bright rose red, and the posterior lip much enlarged—along its centre, a bright red band, which does not bleed. Nov. 9. Neck paler and smaller, after leeching; bright red zone along the lower lip very evident, but does not bleed. A large quantity of slightly opake tenacious mucus pouring from the os and over the lower lip, which in the upper folds of the relaxed and œdematous vagina looks yellow; below it contains the amyloid only. The mucus of the uterus, when removed, seems as clear as the white of egg, except for some whiter striæ intermingled with it. Pil. copaib. cauteriz. V. S. This is a specimen case of obstinate uterine leucorrhœa, with congestion of the neck, and some of the "morbid rednesses" of Lisfranc about it; it fully confirms all that has been previously said upon the subject, and is, I hope, mending slowly under the treatment adopted, which has been antiphlogistic and local.

We shall next furnish some cases from cotemporary authorities.

Case 35. (Mons. Récamier, loco cit.) "In consequence of a confinement, a young person became subject to a supra-orbital cephalalgia, of the most fatiguing kind, and almost incessant. She had, at the same time, a very abundant leucorrhœal flux, opake and sometimes bloody, when not menstruating, although the touch indicated no lesion of the neck, nor body of the womb. I found the circumference of the os surrounded by a red areola, tender, and bleeding easily on touch, or when absterged. The redness passed into the neck (cauterized by Nitr. Hydr. injections and starch powder). In six weeks, the phlegmasia of the mucous membrane of the neck, the leucorrhœa, and the headache of four years' duration were cured." A case conclusive both as to the pathology of leucorrhœa, and the necessity for the speculum as a means of supplying the deficiency of the touch. Light is here thrown both upon the nature of vaginal hemorrhage, and of cephalalgia. (See also case 28.) *Case* 34. (Same.) A young woman, twenty-four years of age, had been emaciating considerably for two years; she had an abundant leucorrhœal discharge, *of which a chronic inflammation of the os was recognized as the cause.* By the same treatment, she soon recovered strength, flesh and color, menstruated and conceived. This, to an old practitioner, would appear a case of leucorrhœa from "debility," and is a type of most of its class.

Case 35. (Same.) A lady aged 27. Had had, since her confinement, prolapsus, which presented a state of chronic inflammation. All the red and granular part was cauterized, &c. She was cured and became pregnant.

Case 36. (Bennett, loc. cit.) Resulting from labor. "Rather vivid redness of the neck and lower part of the vagina; a small ulcer with fine granulations occupying the inner surfaces of the two lips; mucus between them *turbid and whitish;* in the cavity of the vagina is found a small quantity of *mucoso-purulent* secretion." In ten days after, neck larger and firmer; ulceration extended beyond the cavity of the neck, and occupying both lips; a small quantity of whitish mucus." The iritability of the ulcerated surface being destroyed by caustic, the affluxus towards the uterus ceased and the engorgement diminished. We appeal to this case as a full corroboration of the accuracy of our own statements.

Case 37. (Boivin and Dugès. 392.) "With the assistance of the speculum, some reddish brown spots were observed on the os uteri, placed on a ground nearly white; a viscid *yellowish* fluid issued freely from its orifice."

Case 38. (do. 363.) Obstinate leucorrhœa. "Utero-vaginal orifice tumefied, tender, livid, red and ecchymosed; on the anterior lip two tumors the size of a pea. *White* discharge proceeding from cervix (Qu. *os?*) uteri."

Case 39. (do.) Mme. M. had experienced for some months a sense of swelling and weight in the vagina, with a discharge of greenish white matter. On examination, cervix uteri low down in the vagina; much tumefied, though soft and yielding to the finger. The part appeared deep red, the borders of the orifice superficially ulcerated, and of a red brown. Application of the instrument caused a discharge of ʒi of pure blood.

Case 40. (do. p. 375.) On examination, eight days after catamenial discharge, observed a *yellow* viscid fluid to escape in abundance from the os, which was one-third larger than natural, presenting on its surface a livid redness, resembling that kind of nævus which is commonly called "wine stain." There were also at that part, several small whitish and soft elevations, inappreciable to the touch (granular inflammation of the os). It was from the intervals between these miliary papules that the blood escaped on pressure.

Case 41. (do. p. 376.) Catamenia abundant and irregular, accompanied with leucorrhœa, and considerable tumefaction of uterus. Surface of the os livid and beset with miliary vesicles (granular inf.). The os bleeds on pressure and in defecation.

Case 42. (do. 407.) Mme. C. habitually subject to greenish white leucorrhœa in great abundance; os swollen and elastic: a little sanguineous discharge. The os is of a red brown color and edges excoriated. The discharge proceeds from the interior of the orifice. Some years afterwards the disease re-appeared. On a fresh examination, "the os was of the size of a large chestnut, widely open, with its borders excoriated. The anterior lip presented a superficial ulceration all over its surface, exposing the sub-mucous tissue vividly red, and bleeding on the slightest touch."

Case 43. (Dr. Buel.) H. L. æt. 28. Subject to leucorrhœa for ten years. The cervix elongated, hard and painful; color much heightened and evidently much swollen. Dec. 31. Cervix looks swollen, and has an angry livid appearance.

Case 44. (do.) B. F. æt. 27. Cervix hard, swollen, painful to the touch; color much heightened; a profuse white discharge.

Case 45. (do.) E. C. Sept. 3. Anterior lip of os much engorged, hard, painful, swelled, of livid color; abundant brownish discharge. Sept. 5. Much better; a white discharge.

Case 46. (do.) H. P. æt. 30. Sept. 13. Cervix enlarged, indurated, heightened in color, red, thickly studded with little granules, resembling the papillæ of the tongue. Parts bathed in a profuse whitish or yellowish discharge.

Case 47. (do.) C. P. 47. Hard white engorgement of cervix. Profuse leucorrhœa.

Case 48. (do.) E. M. æt. 31. A profuse discharge; at first yellow, afterwards white; cervix enlarged, hard and tender; os livid, patulous, with ulcerations rather on the inner portions of the lips and extending into the canal of the cervix.

Case 49. (do.) S. R. æt. 21. Has an infant 13 weeks old; since her confinement has had pain, &c., &c. Cervix hard and livid; very low; a large ulceration on inner surface of anterior lip; a yellow discharge from the cervix (?) and adjoining parts of the vagina.

Case 50. (do.) M. H. has a constant discharge of yellowish matter. A large ulceration or erosion, three-fourths of an inch wide, having a granular appearance, covered by opake white mucus, and bleeding easily when touched. 25th, large granulating surface, and profuse white discharge. The preceding cases all show satisfactorily the state of the uterus, but the precise source of the discharge is not, it is to be regretted, stated in a single one.

Case 51. (Dr. Taylor.) Mrs. B. By touch discoverved the posterior part of the uterus of the size of a hen's egg, and hard. The anterior natural. By the *spec.* os (neck) of a rose color (hard engorgement); discharge of leucorrhœa from the uterus.

Case 52. (do.) M. D. æt. 32. Leucorrhœa for two years; neck full, large, round, thickly papillated; os red and nearly closed with glairy discharge from the uterus. Vaginal (?) secretion yellow.

Case 53. (Dr. Beales.) Mrs. F. 22. *Per vag.*, uterus swollen, rather tender, hotter than natural; lips of os pouting. *Per spec:* whole vaginal part of uterus engorged and red.

Case 54. (do.) Mrs. K. æt. 23. Excessive leucorrhœa; cervix uteri exceedingly painful to the touch. *By spec:* parts swollen to about the size of two nutmegs, and a quantity of stringy mucus emerging from the os.

Case 55. (do.) Miss B. 32. Considerable leucorrhœa, of a yellow color; cervix uteri deep red; anterior lip swollen, sensible to touch; mucous membrane of vagina heightened in color and bathed in mucous secretion.

Case 56. (do.) Mrs. A. Complains of excessive leucorrhœa, discharge of a greenish yellow, very fetid, and so profuse as to compel her to wear 18 or 20 napkins in a day. The vaginal portion (cervix) of the uterus, very much enlarged, four ulcerations on its anterior lip, three about the size of a split pea, the fourth more than twice that size, all foul looking, and about one line deep. " Vag. almost filled with its (?) morbid secretion and strings of tough, ropy mucus hanging out of os, of such tenacity that I could not sponge them away."

Case 57. (do.) Slight leucorrhœa. Cervix somewhat enlarged, of a very bright red color, with three or four fissures leading into the os, the edges of which are in a state of ulceration, and the whole organ excessively tender.

Case 58. (From Balbirnie, on the French pract. in Fem. dis. quoted by Ashwell.) Mme. R. aged thirty. A continual and abundant discharge of a yellowish, thick, brown mucus from the vagina, or of a glairy matter, like the white of egg, sometimes spotted with blood; all the surface of the os covered with a thick mucus, which, when wiped away, presented a greyish white color, contrasting with the red tint of the neck; slight lineary excoriations observed in the direction of the orifice. On pressure, a considerable quantity of thick mucus issued from the os. (Soot tea injection into cavity of the uterus.)

Case 59. (do.) Mme. L. aged thirty. From the neck, seen by the *spec.*

exuded on pressure a great many drops of blood (sang. engorgement); the edges of the os tumid, and of a lively red; on the posterior lip a small deep ulceration; a yellowish white discharge, proceeding from the uterine cavity, impregnated all these parts. (Soot water injections into the uterus—cure—pregnancy after 10 years' sterility.)

We have now presented to the reader fifty-nine authentic cases, in which leucorrhœal discharge depended upon organic lesion of the womb, or vagina; it would have been easy to have increased the number, but this would be unnecessary, for unless it can be shown that, which is contradicted by the united testimony of all who have published the result of their observations, leucorrhœa is also frequently seen to exist in the absence of any appreciable morbid state, these are surely sufficient to establish the real and symptomatic nature of the flux in question. In forty-six out of these fifty-nine cases, it is distinctly stated that the neck of the uterus was either swelled, red, livid or granular; in two or three only it presented a natural appearance as to size and color, the redness being confined to the internal lining membrane. In thirty-three out of the fifty-nine, ulcerations existed: in forty the discharge was distinctly seen to be escaping from the os uteri; in others this is not noticed; in five the vagina was red, and in two only was the discharge chiefly follicular. The last statement sets at rest the idea that leucorrhœa is, for the most part, a vaginal disease; whereas its almost constant connection with an inflamed state of the neck and internal mucous lining of the uterus, and vagina, is clearly demonstrated by evidence which we firmly believe cannot be shaken, and the truth of which further observation will serve only to confirm. The progress and effects of the inflammation are not the same in all cases; in some we find only the mucous membrane of the womb vascular and secreting an increase of its natural, or a somewhat modified discharge. In others, ulcerations of a more or less depth, extent, vividity and variety of appearance, are met with; in many cases associated with general or partial swelling and redness of the neck, with granular tubercles or papules, and with more or less redness of the vagina, in which case the follicular discharge of that part is usually much increased. Which of these lesions is the starting point it is difficult, though practically not unimportant to decide; but it is perhaps sufficient to know that such is their mutual dependance on each other, that each, when met with, requires special attention before coexisting ones can be removed. Thus, a muco-hysteritis may cease upon, or its cure result in, the disappearance of a congestion of the neck; while the latter has equally been seen to subside upon the cure of an ulceration, or an ulceration to require the removal of one or both of the other morbid states, before it could be made to cicatrize. Such we believe to be, even in cases which present the appearance of great constitutional debility, the true pathology of leucorrhœa; and we flatter ourselves that we have in the foregoing pages, drawn the attention of the profession to the fact, scattered about we acknowledge, in many volumes, but not before insisted upon and illustrated with equal force and distinctness, of the dependance of leucorrhœa upon certain phlegmasial states of the vagina and uterus, of its being not a disease per se, but a mere symptom of disease in the parts by which it is secreted, and seldom, *if ever*, the result of simple atony of those parts, as has so long been surmised. Nor is the discharge alone, we apprehend, often, if ever, the sole cause of the debility which confessedly so often attends it, but which depends rather upon the constitutional irritation and derangement of the general health, consequent upon the existence of a chronic local phlegmasia. The error which Broussais so ably exposed relatively to certain cases of dyspepsia, has been extended to the disease in question; the morbid effects of chronic gastro-enteritis, and muco-hysteritis, and to a certain extent their pathology, are analogous, and their cure depends alike upon a judicious employment of a suitable anti-phlogistic treatment, and the avoidance of the natural and artificial stimuli of the organs diseased. But, while we have questioned its frequency, and adduced abundant evidence to justify our incredulity, we have not wholly denied the rare, but possible occasional indubitable occurrence of cases of either, dependent, if the reader will, upon a simple atony of the part, or an increase not appreciably morbid of the secretory irritation upon which the phenomena of either depend. The term " weakness" has long been a cloak for ignorance, and the more enlightened pathology of modern times has established that of all chronic fluxes upon a more rational and scientific basis. Few are not now known to depend upon a state of inflammation more or less acute: if there be other causes for the uterine, we have not encountered a case which countenances the idea. The lesions of the vagina and uterus with which we have shown that leucorrhœa is so invariably connected, are not sufficiently appreciable and seldom curable without the aid of the speculum, an instrument as indispensable in the treatment of the diseases of these organs, as the stethoscope in those of the heart and lungs, and to the non-use of which the errors of our predecessors on the subject of the uterine catarrh are referable. It is not even now—for two very obvious reasons, the disagreeable nature of the investigation, and the natural repugnance of both physician and patient to its use—the custom to employ it in the treatment of leucorrhœa. But if the physician can but become assured of its value and necessity in these cases, he will, in justice to his patient and himself, recommend and employ it. Its use will then become custom, surprise at its proposal will soon cease to be felt; nay, surprise may even be expressed if the *usual* means of full investigation be not resorted to, and the sufferer with leucorrhœa will look to be examined with the speculum with as much certainty as the pthisical one does to be percussed and auscultated. The objections to its use must yield to the sense of its *necessity and utility;* and when conscientiously and properly urged, there will be found, after all, few sensible and right-minded females who will object to its employment; when properly used, few will refuse to consent to a repetition. We trust that no other than a conscientious belief in both, founded upon our ideas of the nature and cure of the affection, and the opinion of others, impels *our* advocacy of it in the disease in question, and whenever it shall come to be generally employed, much suffering will be speedily obviated, many errors in diagnosis corrected, many a barren woman will become the joyful mother of children, and many a case of ultimate degeneration into incurable malignity, will be prevented. If any such object be effected by the perusal of this essay, the time and labor which it has cost to produce it, will not have been spent in vain.

Art. IV.—*Surgical Cases.* By Alfred C. Post, M. D., Surgeon to New York Hospital, &c.

Case I. Subcutaneous venous erectile tumor of cheek. Ligature of the common carotid artery. Death from phlebitis with deposition of purulent matter between the membranes of the brain.

Michael Lilly, an Irish laborer, 27 years of age, called on me in April, 1845, to consult me about a tumor which involved nearly the whole extent of the right cheek, and projected externally and into the cavity of the mouth. The tumor was evidently formed of a congeries of dilated veins, some of which could be distinctly seen through the skin, and others through the mucous membrane. When the patient stooped and made any exertion, as in tying his shoe, the prominence of the tumor was greatly increased. The thickness of the tumor when distended was about two inches.

From the time of birth until about three years before he called on me, there was merely a small discolored spot upon the cheek without swelling. At that time it began to form a prominence upon the cheek and to increase in size, and it continued to do so until he came under my care.

April 12th. After consultation with the surgeons of the New York Hospital, I applied a ligature to the carotid artery, just above the omohyoideus muscle. The operation was borne without the slightest indication of suffering. The wound was dressed in the usual manner with sutures and adhesive plaster. The patient was directed to be kept quiet and to live on gruel.

On the afternoon of the same day the patient was tranquil; pulse 60. For several days afterward he complained of soreness in the wound and difficulty of swallowing; pulse fluctuated between 84 and 95.

16th. Removed the straps and sutures. The edges of the wound gaped a little. Applied adhesive straps and lint spread with cerate. Patient appears very comfortable; pulse 88; skin cool; countenance good; tumor much less prominent than before the operation.

22d. Had this morning, without any obvious cause, a fainting fit, with cold extremities and very feeble pulse. Sinapisms were applied to his extremities, and he very soon recovered. When I saw him a few hours afterward he appeared comfortable; pulse 68, and of moderate force. 24th. Pulse 72; tongue, which had been somewhat dry and furred, becoming clean and *moist;* wound healing; condition every way improving. 29th. Improvement has continued until to-day: the wound has healed, excepting a small space around the ligature. This morning he was attacked with a chill, followed by febrile excitement, headache, &c. Pulse 100; skin warm and moist; tongue rather dry in the middle.

May 1st. Complains of soreness and stiffness in the right side of the neck, above and behind the wound: there is some swelling with tenderness in the same region. Pulse 100 and rather feeble: the patient appears much prostrated: bowels rather confined. Ordered ol. ricini; three leeches to the neck; wine-whey. 2d. Soreness of neck somewhat relieved by the leeches: patient feels rather better: pulse 96 and feeble: skin cool: tongue less dry. Complains of soreness in the tumor of the cheek, which appears somewhat inflamed. 3d. General condition about as yesterday: tumor in the cheek a little more inflamed. Ordered a blister over the tumor: continued wine-whey: add beef-tea. 5th. Patient feels much better, and sits up in bed: pulse 92 and has more force: tongue moist and moderately furred. There is considerable swelling at the upper part of the neck on the right side and behind the veins of the jaw, with some tenderness: the tumor of the cheek continues hard and tender, but less painful than before the application of the blister. 7th. Swelling and tenderness of the neck somewhat diminished: fluctuation is perceptible in the tumor of the cheek: I opened it with a lancet, and it gave issue to a drachm or more of dark-colored purulent matter. Some oozing of blood took place after the escape of the matter: I arrested it by introducing within the lips of the wound a pencil of argent. nitrat. Continue wine-whey and beef-tea.

8th. Found the patient sleeping with his face covered with profuse perspiration. When I awakened him his manner was hurried and agitated, with tremor of his muscles: pulse 92 and of moderate force: tongue moist, but furred. The nurse stated that the patient had been delirious during the night, and that he had vomited after taking wine-whey about an hour before my visit. 9th. Last night the patient appeared to be sinking. The house-surgeon, Dr. Crane, administered brandy and arrow-root, after which the patient rallied somewhat. His condition this morning was as follows: Pulse 120: skin dry and hot: tongue moist and covered with a white fur: manner wild, hurried and anxious: no suppuration in the cheek: swelling and tenderness there and in the neck diminished. Continue brandy and arrow-root, wine-whey and beef-tea. 10th. Patient died. 11th. Autopsy. The right internal jugular vein was thickened in its coats and adherent to the surrounding parts: when it was opened, it was found to be distended with purulent matter and shreds of fibrin. The inflammation of the vein extended from the base of the cranium down to the space just above its junction with the subclavian vein, where its cavity was entirely obliterated by adhesion of its opposite sides. No traces of inflammation were detected in any of the veins below. On laying open the congeries of veins constituting the tumor of the cheek, it was found to contain soft coagulated blood, but no pus. Four small white calculous concretions, or phlebolites, of a globular form, were found in it: they varied in size from the volume of half a pea to that of a large pin's head. On the left hemisphere of the cerebrum there was extensive effusion of concrete purulent matter between the arachnoid and the pia mater, along the course of the veins running over the anfractuosities, and, in some places, extending between the convolutions. There was less extensive effusion of a similar character on the right hemisphere. A similar effusion was also observed on both surfaces of the cerebellum, and at the base of the cranium, between the arachnoid and the dura mater. A small portion of fibrin was also found in the right lateral sinus near its termination. No marks of inflammation or of suppuration were found in his lungs, liver or kidneys, or any of the articular cavities. The ligature had not come away from the artery during life; but it had become detached in laying out the corpse. I found the artery entirely divided, and a pretty firm clot on each side of the division, obliterating nearly an inch of each portion of the vessel.

The result of this case was entirely unexpected and unusual. I am not aware that there is any case on record, in which the ligature of a large artery has been followed by inflammation of a corresponding vein, when the vein itself was not disturbed during the operation. In the present case, the sheath of the vessels was opened over the carotid artery, and the internal jugular vein was not exposed nor disturbed in any of its relations.

The existence of phlebolites is also an event of very rare occurrence, and I have never had an opportunity of observing them in any other case.

Case II. Calculus in the urethra, occasioning retention of urine.

A son of David Connolly, four years of age, was attacked, on the 14th December, 1844, with difficulty in voiding his urine: on the 15th, he had entire retention. On the evening of that day, he was taken to the N. Y. Hospital, and Dr. Cook, the house-surgeon, introduced a catheter and drew off a pint of urine. In passing the catheter, he encountered a slight obstruction in the urethra, but it readily yielded. On the following day, Dec. 16th, there was again entire inability to evacuate the bladder, and the patient was again taken to the hospital. I passed a silver catheter along the urethra, and at the distance of about three inches from the orifice, I felt an obstruction. I could feel with my thumb and finger that there was a foreign body in the urethra. I pressed it forward as far as the fossa navicularis, but could not get it through the meatus. I bent a silver probe into the form of a hook and passed it over the stone, and then drew it towards the orifice, but the meatus would not yield sufficiently to allow its passage. I then dilated the orifice with a probe-pointed bistoury, after which I readily extracted the calculus. Immediately afterward the patient was enabled to pass his urine freely.

The calculus was of a white color, of a flattened oval form, smooth on its surface, and three-eighths of an inch in length and three-sixteenths of an inch in breadth. It weighed two grains.

Case III. Calculus firmly impacted in the urethra. Urethrotomy.

George Lyons, a boy 12 years of age, was admitted into the New York Hospital, on the evening of the 11th January, 1845. About six weeks before, a small calculus had been extracted from his urethra, after the division of the meatus by Dr. Colville. From that time, he had suffered from the usual symptoms which indicate stone in the bladder. On the day before his admission into the hospital, he had been conscious of the existence of some obstruction in the urethra, and his urine had flowed with great difficulty and in very small quantity. Soon after his admission, an anodyne was administered, after which his urine escaped with somewhat less difficulty. I found him suffering considerable pain, and I could distinctly feel a hard body in the urethra, just behind the scrotum. I put the patient into a warm bath, and then introduced a large catheter down to the calculus and held it there some minutes, and on withdrawing it, I directed the patient to make an effort to pass his urine; some urine escaped, but the calculus remained fixed in the same situation. I then had the patient placed upon a table, and secured his hands and feet with bandages, after which I passed a silver catheter through the urethra down to the calculus, cut down upon the point of the instrument, and extracted the stone. It was of a yellowish brown color, and of the form of half a cube, with its edges and angles rounded off; its broad surfaces were rough and its edges smooth. Its diagonals were about half an inch in length. Its weight was twelve grains. To prevent infiltration of urine into the cellular tissue of the scrotum, I passed a large silver catheter into the bladder and allowed it to remain there.

The presence of the catheter occasioned some irritation, and it was followed by œdema of the scrotum. On the fourth day the instrument was removed. After that time the urine passed chiefly through the natural canal, but a portion of it came through the wound. On the 8th February the patient was discharged, cured; the wound having healed, and the urine passing freely through its natural channel.

Case IV. Retention of urine, occasioned by a calculus in the urethra.

On the 19th March, 1845. I was requested by Dr. Fitch to see an elderly gentleman who had been troubled for some time with difficulty in passing his urine, and who had entire retention at the time when I was called to see him. I passed a silver catheter down to the membranous part of the urethra, where I encountered a calculus which resisted its further progress. While I was sounding him the stone slipped back into the bladder, and the catheter, no longer encountering any resistance, passed readily onward to the same cavity, and evacuated a large quantity of urine. A few weeks afterward, the patient, while voiding his urine, passed with it a calculus of considerable size.

Case 5th. Stone in the bladder, removed by an operation. Recurrence of symptoms after an interval of four months. Second operation.

June 29th, 1844, I performed the operation of lithotomy on Michael Turley, a boy of the age of four years and five months. About three years before, he had begun to complain of pain in passing his urine, and had continued to do so until the time of the operation. On sounding him, I could feel the stone with sufficient distinctness, but the sound which was elicited by bringing the instrument in contact with the stone was quite obscure. I performed the bilateral operation with my double prostatotome, an instrument which is described in the New York Journal of Medicine, &c., for March, 1844. In consequence of the struggles of the patient, I had some difficulty in passing the rod of the instrument into the urethra through the incision in the perineum. On seizing the stone with the forceps, and attempting to extract it, it was broken down, being very friable in its structure. I removed most of the fragments with the forceps and scoop, but some small ones remained, closely adherent to the mucous membrane of the bladder. I directed ten drops of tinct. opii in two doses. Two or three hours after, I called again and injected the bladder freely with a stream of warm water: several small fragments of stone came away. I introduced my finger into the bladder and made a careful examination, but could detect no roughness upon its lining membrane. I saw the patient again in the evening: he complained of no pain, but was somewhat feverish; his pulse was 140; his urine dribbled away constantly through the wound. 30th, 9 a. m. Patient appears very comfortable; no pain; febrile excitement diminished; no movement of the bowels since the operation; ordered a teaspoonful of magnes. sulphat. 7 P. M. Medicine has operated too freely: ordered compound chalk mixture. July 1st. Pulse reduced to 108. Patient is in good spirits, talking and singing. Urine continues to dribble away through the wound. 2d. Found patient walking about the room amusing himself; pulse 100; Directed him to remain in bed. Since yesterday afternoon the dribbling of urine has ceased: he holds it for a time in his bladder, and then passes it with a gush through the wound into the perineum. On the 4th, a portion of the urine began to pass through the natural channel. 8th. Urine comes chiefly through the natural passage, but since yesterday he has screamed and pulled the penis each time that he has made water, as before the operation. 10th. Urine passes entirely through natural channel, and with little pain. Wound much contracted: granulations healthy; patient walks about. August 2d. Patient appears to enjoy good health; passes his urine in a good stream and without pain through the day, but wets his bed at night. The wound is contracted to a mere point, where there is some induration and soreness, and from which there is an occasional pretty free discharge of purulent matter.

Sept. 19th. I visited the patient after an absence of six weeks: the wound has been healed for some time, and the patient is in good health, except that he has a mucous discharge from the bladder.

March, 1845. I was called to see the patient again, and was informed that about the beginning of November he began to suffer again from symptoms similar to those which he had prior to the operation. I sounded him and detected a stone.

April 16th, 1845, 11 A.M. I operated in the same manner as before, except that on withdrawing the staff, I introduced through the perineum, into the urethra, a grooved conductor with a long beak, along which I passed the rod of the prostatotome, and completed the operation without any difficulty. I extracted two calculi, after which I carefully examined the interior of the bladder with my finger, and could not detect any others. The patient struggled violently during the operation, and seemed to be in great pain when it was completed. Ordered tinct. Opii gtt. x. 6 P.M. Found the patient in bed, perfectly composed and free from pain; he had not slept. There had been a pretty free discharge of blood with the urine, which had dribbled through the wound; no blood was flowing at the time of my visit; pulse 130, of moderate firmness; skin warm and moist; countenance good.

17th. Patient has passed a comfortable night, and appears well this morning; no pain; skin natural; pulse 104; tongue moist and nearly clean; urine passes chiefly through the wound, but partly through the urethra.

18th. Free from pain; pulse 94; bowels open; urine since last evening has passed entirely through the penis, and by voluntary effort; patient feels so well that he walked across the room this morning to look out of the window.

19th. Continued remarkably well through the day yesterday; he sat by the window a considerable time, and may have taken cold; he slept during the evening, but at midnight became restless and uneasy, and continued so throughout the remainder of the night; pulse this morning 125; tongue moist and but slightly coated; no heat of skin; urine passes entirely through the penis, and in a full stream, but he complains of some pain in passing it. Ordered Spt. Minderer., a teaspoonful every two hours.

May 2d. Since the last report the patient has been improving; he is now dressed and playing about the room. The wound is very much contracted.

May 31st. The patient appears to enjoy perfect health; he passes his urine in a full stream, and without pain or inconvenience; no urine has flowed through the wound since the day after the operation; the wound is entirely healed.

The fragments which were removed in the above case, at the first operation, were of a reddish brown color, probably from mixture with blood. The weight of those which were collected was 28 grains. They were analysed by Dr. Draper, and were found to consist of phosphate of lime. The calculi which were removed at the second operation, were of a white color, and were also found to be composed of phosphate of lime. One of them weighed 92 grains; the other 40 grains. The smaller one was sawn open, and there was found within it a nucleus of irregular form, which appeared to be a fragment of stone.

Case VI. Laryngotomy in Diphtheritic Croup. On the 9th of February, 1845, I was requested by Dr. Gunn to see a little girl three years of age, who had been suffering for the last four days from a croupy cough, with considerable dyspnœa. The attack had commenced with sore throat. The case had been actively treated with emetics, leeching, blistering, calomel and ipecac, &c., but the symptoms had been steadily growing worse. A child of the same parents had died three years before from a similar affection. When I saw the child, I examined the fauces, and found the tonsils, uvula and back of the pharynx considerably swollen, and covered with an ash-colored exudation. As the disease had continued so long in spite of active and judicious treatment, and the prognosis was extremely unfavorable, we determined to make an artificial opening into the trachea. I accordingly made an incision in the median line a little above the sternum, but found the space between the sternum and the isthmus of the thyroid body exceedingly small, and the right vena innominata arose above the sterno-clavicular articulation, so as to render it unsafe to prosecute the dissection in that region. I therefore extended the incision upward, and exposed the crico-thyroid membrane, through which I made an opening, which I enlarged by snipping off a small portion of the thyroid cartilage. The operation was tedious in consequence of the delay which was rendered necessary by the oozing of blood. After it was completed, the air entered the larynx freely through the artificial opening, but still the breathing did not seem to be essentially relieved. The child died about twelve hours after the operation. Permission to examine the body could not be obtained.

Case 7th. Imperforate Rectum. On the 3d of March, 1844, I was consulted by Dr. Gunn in the case of a young female infant, which had been born about 48 hours before I saw her. There had been no evacuation from the bowels; this had not excited much uneasiness during the first 24 hours, but at the end of that time the child had begun to vomit a grass-green fluid, and the vomiting had been frequently repeated. The child seemed much prostrated at the time of my visit. Attempts had been made to introduce instruments into the rectum, but without success. The anus was naturally formed, but on passing my little finger through it, I found an obstruction in the intestine at about one-third of an inch from the surface; at this point there was entire occlusion of the gut, and no fluctuation could be felt beyond. I introduced a trocar through a canula in the direction of the rectum, about half an inch, and on withdrawing it, found its point stained with meconium. I plunged the instrument deeper in the same direction, and as I withdrew it, several ounces of thick tarry meconium escaped. I injected an enema through the canula, and a further evacuation of meconium followed; only a drop or two of blood escaped, and the child's countenance seemed brighter than before the operation. On the following day, I was disappointed in finding that there was no further improvement; there had been no additional evacuation, although another enema had been administered; about one ounce of blood had escaped at the time of the injection. Since the operation, the child had vomited a number of times, the same kind of green fluid as before, and seemed still more prostrated. It died soon after my visit. If the operation had been performed at an earlier period, there is reason to believe that the fatal result might have been prevented.

Art. V.—*A few remarks upon the use of Mechanical Appliances for the confinement of the body or limbs of the Insane.* By Pliny Earle, M.D. Physician to the Bloomingdale Asylum for the Insane.

The New York Journal of Medicine and the Collateral Sciences for May, 1845, contains a notice of the Twenty-fourth Annual Report of the Bloomingdale Asylum, in which extracts are given upon the subject of Mechanical restraints from both that report and the last report by Dr. Ray, of the Maine State Asylum. These extracts are placed in juxtaposition, for the purpose of showing a difference of opinion between the authors in regard to the utility of restraining apparatus in cases marked by a suicidal propensity. Being responsible for the sentiments advanced in the former of the two reports mentioned, and having had an opportunity of learning the views of Dr. Ray upon most of the specialities included under the general treatment of insanity, I believe myself justified in saying that, so far as relates to the use of restraints, there is no difference of opinion between us. The apparent discrepancy exhibited in the notice alluded to, arises from a comparison, or rather a contrast, of two extracts materially dissimilar in their nature. The quotation from the report by Dr. Ray, treats of the subject of *restraints in general*, while that from the report of the Bloomingdale Asylum has reference to their use *in suicidal cases alone*. This will be perceived by any one who, sufficiently interested in the subject, will take the trouble to read them. At the same time, by comparing the remarks of Dr. Ray with the extract from the report of the Bloomingdale Asylum which is introduced immediately after them, page 392, the coincidence of opinion of the two writers upon the general subject of restraints will be sufficiently evident.

The error, undoubtedly inadvertent, which is here pointed out, would not, under any circumstances, be of sufficient importance to require an exposition of this kind. But at the present time, while the institutions for the insane have scarcely yet passed through the revolution which absolved them from the horrors of the old *régime*, while they are still in the state of transition from the cheerlessness and wretchedness of a prison to the comforts of a home, it is a matter of no trifling importance, that unanimity of opinion and similarity of action should prevail among those who are directly engaged or interested in the management of them.

Especially is it desirable, that they should be preserved from arranging themselves as hostile partizans, in reference to any question relating to the treatment of the insane, and thus incur the liability of adopting ultra measures, adverse to the true interests of those to whose welfare they profess to devote themselves.

The doctrine of the propriety of the total, unqualified, unconditional abolition of mechanical restraints in establishments for the insane, was broached a few years since in England, and soon afterwards practically adopted at the Lincoln Asylum, under the superintendence of Mr. Hill. The precedent has since been followed in the institutions at Hanwell, Gloucester, Lancaster, and perhaps some others. This principle of action has given rise to much discussion which, it is to be feared, has not, in every instance, been conducted with that calmness of spirit, exemption from prejudice, and moderation of language, which are essential to both professional etiquette and the attainment of truth.

Hitherto, no essential disparity of opinion upon the subject has appeared among the physicians connected with similar institutions in this country.

At the meeting of the Association of Medical Superintendents of Institutions in the United States, held in Philadelphia, in October last, a resolution was introduced and unanimously adopted, declaring the sentiment of that meeting to be, that the entire disuse of mechanical restraints is incompatible with the true interests of the insane.

Yet, while thus expressing, in a negative manner, their decided belief of the occasional utility of appliances for bodily restraints, they would, undoubtedly, not only assent to, but contend for the following rules of action, viz: that in deciding upon the application of restraints, in any given case, the welfare of the patient alone is to be consulted;—that they should never be applied unless directed by the medical officer, and that they be removed as soon as the object be attained for which they are brought into service.

There is reason to believe that all physicians charged with the care of Asylums have learned that the extent to which mechanical restraints are necessary, is dependent, in a very great degree, upon the character of the attendants upon the patients. If the attendant be ignorant and passionate, the excitement, turbulence, outrageous conduct, and consequent call for bodily confinement, will, on the principle of mental or moral action and reaction, be far greater, than if he be intelligent, and have perfect command over his feelings and passions. The ills of the insane are sufficiently great without subjecting them to punishment for the faults of others.

Experience, that "best of schoolmasters," will, as it becomes more and more enlarged, enable every one directly concerned in the custody of the insane, to devise a greater and still greater number of methods of avoiding the painful alternative of recourse to restraints, and, at the same time, secure a greater degree of tranquillity in the house, and a larger amount of comfort to the patients.

Since the 20th of November last, a period of six months, no mechanical restraint of any kind whatever has, with but a single exception, been placed upon the body or limbs of any patient in the male department of Bloomingdale Asylum.

The exception mentioned was in the case of a patient who, being ill, and perfectly delirious, continually took off his clothing and exposed himself to the cold. His hands were confined with the camisole three days and nights. Among the patients in this department during the time in question, there have been several laboring under a suicidal propensity. Although it has not been thought best to use any mechanical restraints with them, yet there are, unquestionably, cases of this description in which confinement of the limbs is the only certain security against self-destruction; and this, indeed, is not absolutely so. Fortunately, such cases are rare.

In the female department, it has occasionally been found necessary to resort to means for the confinement of the hands. For this purpose however, the camisole (long sleeves, tied behind, the patient's arms being folded on the breast) has almost entirely superseded the muffs and wristbands.

June 28th, 1845.

Art. VI.—*Cases Illustrative of Diseases of the Cæcum and its Appendix.*

The cæcum has manifestly an individuality both of function and disease—having offices to perform in some respects quite peculiar to itself, while it is subject to frequent derangements and fatal diseases, in which no other portion of the digestive apparatus is implicated.

While the former have received far less consideration than their relative importance would seem to demand, the latter can scarcely be said to have a place in our systematic practical works.

A Monograph by Dr. John Burne, an article in Copland's Dictonary of Practical Medicine, and the cases which are detailed in Dupuytren's Chemical Lectures, embrace nearly all that has fallen under my notice upon this interesting class of affections; with the exception of single cases which occasionally appear scattered through our periodicals.

If we take but a very superficial view of this organ, its situation and capacity, its attachment to the parietes of the abdomen, so confining it that its relative position admits of no change, and the circumstance that its contents are moved forward in opposition to the laws of gravitation, it must be evident that the alimentary substances were designed to remain here longer than in any other portion of the alimentary canal.

These considerations have very naturally suggested the idea that the cæcum constitutes a kind of second stomach.

Again, if we examine a little more carefully into its organization, we find the cæcum liberally furnished with large follicular glands, evidently designed for the abundant secretion of important fluids, while the entire organ, with its appendix, is more richly supplied with arterial blood than any other portion of the intestinal canal. It appears from the experiments of Tiedemann and Gmelen, that these follicular glands "secrete an acid, albuminous and solvent fluid, which mixes with, and promotes the digestion of those portions of aliments which have withstood the action of the stomach and small intestines, or have been insufficiently changed by them." We may also remark that the contents of the alimentary canal first acquire their peculiar fecal odor in the cæcum. This, according to the researches of the same physiologists, depends upon an oily volatile substance secreted by the mucous follicles. And we think it highly probable that the appendix performs an important part of this work, since, when examined in its natural condition, it is generally found to contain a portion of this material. Indeed, we think it would be difficult to assign a more probable function to this organ; inasmuch as its formation is such as to preclude the idea of the alimentary substances entering it, while the large supply of blood sent to it must plainly bespeak for it a more important office than merely affording a convenient retreat for such unlucky cherry stones and the like, as may chance to escape from their destined course.

It farther appears probable from the experiments of Tiedemann and Gmelen, that the cæcum performs the additional function of secreting "chiefly from its numerous follicles, an unctuous fluid for the protection of the surfaces of the large bowels from the irritating effects of the fecal matters passing along them," and that the constituents both of this and of the other secretions poured out from its surface, consist of elements which require to be eliminated from the blood; so that, in addition to its other functions, it is also a depurating organ.

We may reasonably infer from the foregoing considerations that the cæcum is an important organ, whose functions can neither be suspended nor suffer material derangement, without serious detriment to the animal economy.

My own observations lead me to apprehend that such disturbances occur much more frequently than it has generally been supposed. Such suspension or modified function may result from various causes, as defective nervous stimuli, the unnatural stimulus of crude undigested food, unhealthy secretions of the prima via, or sympathetic relation with some other organ, in a pathological condition. The following case will perhaps sufficiently illustrate the most simple form of such derangement:

Case I. Mrs. B., now thirty-seven years of age, experienced slight inconvenience early in the summer of 1828, from dyspeptic symptoms, which readily subsided under a regulated diet. From early childhood to that period, she had never suffered from any serious indisposition. She soon lost her ruddy complexion, her usual elasticity and strength began to decline, her lips and tongue became pale, and a general disinclination to physical and mental exertion soon followed. But the more remarkable circumstances manifested in this case, are a slight uneasiness seldom amounting to pain, frequently felt in the region of the cæcum, and ascending colon, attended with an evolution of gas which escapes entirely without odor, while the fecal matters, which are quite natural in appearance, with the exception of perhaps being slightly softer than common, are generally entirely wanting in fecal odor.

This state of things has continued with but short intervals of interruption for more than sixteen years. During this period she has had a good appetite, with no unnatural thirst, and daily motions of the bowels without the use of medicine. The uterine functions have been uniformly healthy. She has borne four children during the time. Menstruation has never been interrupted except during pregnancy and nursing. It has never varied materially in time, quantity, or quality, and has never been attended with pain or any appreciable constitutional disturbance. She has never suffered from leucorrhœa, or indeed from any other indisposition than the above described.

Several intelligent members of the profession have been consulted in this case, and the functions of every organ in the body have been faithfully interrogated and carefully watched, and yet no one has been able to form a satisfactory opinion as to the cause of these peculiar phenomena.

The observations of Dr. Copland upon the functional derangements of the cæcum, seem to throw some light upon this and similar cases, and make it appear at least probable that these peculiarities depend on such derangement. If the views which are entertained in regard to the functions of the cæcum be correct, there will be no difficulty in coming to such conclusion.

I might here introduce several other cases which would seem to confirm the correctness of the views above presented, but perhaps this may be sufficient to direct the attention of other and more competent inquirers to its investigation.

I will however remark, that I had an opportunity about a year since, of making an examination of a case in which the leading symptoms had for a long time been similar to the one already described. In this instance, death was occasioned by the sudden supervention of acute gastro-enteritis. The lower part of the ilium, the cæcum, and a small part of the ascending colon were found very much hypertrophied, the parietes of the cæcum measuring over two lines in thickness, while the cavity of the appendix was so nearly obliterated as barely to allow the introduction of a small probe.

Dr. Copland remarks, that "when the vital energies are weakened and the alimentary canal debilitated, the cæcum often betrays greater disorder than any other part of the digestive system. Its situation and functions will account for the frequency and importance of its diseases. In some cases, the irritation produced by morbid or accumulated matters in it are slight, and readily productive of sufficient reaction of its muscular coats to propel them along the colon. In other instances, the efforts made to accomplish this end, owing to the obstructions occasioned by the lodgment of flatus about the right flexure of the colon, or by irregular spasmodic contractions of this bowel, are ineffectual, and give rise to colicky pains. If the interruption is removed, disorder soon subsides; but if it continues for any considerable time, the more violent forms of colic or ileus supervene."

The two following cases, while they corroborate the foregoing remarks, have some points of peculiar interest as illustrating the fact, that the bowels may be freely evacuated with active cathartic medicine, while substances remain impacted in the cæcum undisturbed.

Case II. On the 7th Aug., 1835, I visited Sauger Brockelbank—a lad thirteen years old, who had complained for two or three days with colicky pains. He had taken salts, castor oil and cathartic pills, which had operated well, but without relieving the pain.

I learned that four days previous to this time, he had eaten freely of choke cherries (prunus virginiana). On examining the abdomen, he seized my hand as it approached the right iliac region, exclaiming that it was very sore. Careful examination discovered a distinct circumscribed fulness and hardness over the cæcum. He complained of thirst and head-ache; pulse eighty-four, and rather hard.

Pres. v. s. ℥ xv., calomel ten grs. to follow in three hours, with castor oil. Warm fomentations to the bowels.

8th. His bowels have been freely moved several times. Soreness over the cæcum still continues; pulse ninety-two, v. s. repeated; calomel four grs., with one-eighth gr. morphine to be repeated every six hours. Blister to the seat of the soreness.

9th. Bowels have not been moved since yesterday; pulse ninety-two; tongue slightly coated with a white creamy covering; pres. calomel five grs., to be followed with castor oil in four hours. Blister to be dressed with warm poultice of slippery elm.

10th. Soreness rather increased; bowels moved, but slightly; pulse ninety-four, small and quick; pres. calomel and Dover's powder, each three grs. every four hours, and fomentations to the bowels.

11th. Has had two slight motions of the bowels—without fecal odor. Calomel and Dover's powders continued; blister renewed and to be dressed with slippery elm poultice.

Evening. His bowels have been moved several times during the day; no fecal odor; complains of thirst, tongue heavily coated but not dark; five grs. of Dover's powder every four hours.

12th. Relieved from pain by Dover's powder, but not otherwise improved; calomel and Dover's powders every four hours, blister renewed.

13th. Tongue more thickly coated; pulse ninety-six, small and quick; pres. cal. five grs., to be followed in three hours with salts and senna, and in three hours the following enema to be administered:

R. castor oil ℥ ij, spts. terebinth ℥ i., warm water one pint.

Evening. The bowels have moved freely several times during the day. The evacuations contained what the mother termed "a handful of cherry stones, which had remained so long that they smelt very bad."

From this time the soreness began to subside, and his recovery was rapid and uninterrupted.

Can there be any doubt that in this case, the cherry stones were lodged in the cæcum during the nine days which intervened between the time of eating and discharging them?

Case III.—At 1 A. M., August 17, 1840. I was called to R. B. aged 20. He complained of excruciating pain in the abdomen, with nausea, retching, anxious countenance, features much contracted, pulse 110, quick, small and tense; the whole abdomen extremely painful to the touch. He had been troubled for several days with diarrhœa, attended with occasional griping pains. For the last twenty-four hours, he had felt a dull aching pain in the bowels, which was increased while in the erect posture, and greatly aggravated by any slight jar, as in walking. But the severe pain came on suddenly on rising from his bed just before I was called, at which time he experienced a smart chill. I took from the arm thirty-six ounces of blood, gave him fifteen grains of calomel combined with one-half grain of morphine, and hot fomentations were applied to the bowels. 6 o'clock—pain and nausea slightly relieved, but the soreness of the bowels continued. Bleeding repeated to twenty ounces, which occasioned fainting: calomel ten grs. and Morphine one-half gr.: fomentations continued, and a mixture of calc. magnesia ʒ ij, aromat. syrup of rhubarb, ℥ i; to be given in three hours.

2 P. M., pulse 127. Soft and compressible pain much relieved. By means of a flexible tube passed into the colon, the following enema was administered:—R. castor oil, ℥ ij; spts. turpentine, ℥ i; warm water, three pints. This passed off in the course of three hours, with some fecal matter.

9 P. M., pain much diminished and entirely confined to the right iliac region, where a distinct circumscribed fulness and hardness was perceptible. Calomel, three grs.; morphine, one-fourth gr.; to be given every four hours.

18th. Morning. Pain, soreness and swelling over the cæcum, considerably increased; pulse 130, small and quick. An injection of warm water and castor oil produced a small fœcal evacuation, without odor. Calomel and morphine continued; about four oz. of blood was taken from the region of the cæcum by cupping and fomentations to the seat of pain.

2 P. M. Pain somewhat relieved; blister applied to the seat of pain.

9. Evening, pain much relieved. Injection repeated, but with slight effect—calomel 3 grs., Dov. powder 4 grs. to be given every four hours. Blister to be dressed with slippery elm poultice.

19th. Morning. Rested well: free from pain, pulse 120, soft and compressible. Tongue slightly covered with moist white fur. A mixture of castor oil, ℥ i., and an equal quantity of aromatic syrup of rhubarb, to be given directly.

2 P. M. Has had rather a scanty evacuation, tinged with bile, with slight fæcal odor; feels much relieved.

8 o'clock. Evening. Pulse 110, soft and compressible; bowels have been freely evacuated; fæcal odor, strongly marked. 5 grs. Dov. powders to be given for the night.

20th. Morning. Has had a tolerable night's rest; pulse 110; bowels acted freely; complains of soreness, and some deep seated pains in the region of the cæcum. Blister dressed with mercurial ointment.

Evening. Pulse 100; swelling and soreness still continues; camphor and opium pill to be given at bed time. Mercurial dressing continued.

21st. Still complains of dull, deep-seated pain: pulse 100; camphor and opium pill; mercurial dressings continued.

Evening. Pain continues; pulse more full and hard; tongue more coated, with edges very red; colon distended with ℥ iv. castor oil, in five pts. warm water. This brought away an apple seed, with some flakes of hardened fæcal matter which appeared as if broken from a hard mass. Pres. Dov. powder and cal. *aa* 5 grs. to be repeated every four hours.

22d. Morning. Has had a quiet night; pulse 100; tongue looks better; swelling and soreness much relieved; skin has been in a moist state during most of the night. Has had a large evacuation of offensive fæcal matter, with several hardened lumps in which were found a number of whole, unripe blackberries. On inquiry, no fruit of the kind had been taken since the Saturday, a week before his illness.

Evening. Has had several evacuations during the day, with fragments of hardened fæcal matter, containing numerous seeds of blackberry.

From this time he began gradually to recover, although it was several weeks before the soreness and swelling had so far subsided as to allow of his returning to business.

He has since had several slight attacks of pain and soreness in the region of the cæcum from error in diet, which have readily yielded to prompt treatment.

We may remark that in both of these cases, during the time in which foreign substances remained impacted in the cæcum, although the bowels had been repeatedly freely acted upon by medicine, there was almost an entire absence of fæcal odor in the alvine discharges. I have noticed the same circumstance in several other similar cases, and recognized the reappearance of the odor, as one of the earliest symptoms of anything like permanent relief.

Case IV. On the evening of the 29th of August, 1835, I visited Miss ———, a young lady, 16 years of age. She had suffered from slight headache, for two or three days. Four days previous, while walking in the garden, she had taken several unripe plums, since which time she has had no motion of the bowels. I attributed her headache to this circumstance, and directed castor oil and aromatic syrup of rhubarb, of each one ounce.

30th. She has had no motion of the bowels: headache continues; pres. R. Calc. magnesia ʒi; spts. ammon. aromat., ʒi; mint water, ℥i; to be taken directly, and repeated in three hours if required.

Evening. Medicine has had no effect, and the following was ordered: calomel 8 grs., com. ext. colocynth 12 grs., and should this have no effect, it may be repeated in six hours.

31st. Her medicine has had no effect; complains of pain in the bowels. On examination, I discovered tenderness and slight fullness in the right iliac fossa. V. S. ℥xvi. fomentations to the abdomen, and an enema to be administered directly, and should there be no motion of the bowels in three hours, the following mixture to be given: castor oil, ℥i, aromatic syrup of rhubarb, ℥ss, with the addition of two drops of croton oil.

From this time to the third of September, being ten days from the time she had taken the plums, although all ordinary means had been resorted to, such as bleeding, blistering, warm baths, enemas and active cathartics, no passage of the bowels had been effected.

At the request of Dr. Bristol, who was now called in consultation, the croton oil, warm bath and enema were repeated, but all with no effect.

Sept. 4th. The soreness and pain have increased during the night: tongue loaded with a heavy white coat; pulse 88, quick and small; calomel and Dover's powders each three grs. every three hours. About noon she experienced a smart chill, which was followed by severe pain and exquisite tenderness, which spread rapidly over the whole abdomen.

Drs. Cheney and Bristol were now called in consultation. The stomach had become so irritable as to reject everything taken into it, and the rectum so sensitive, that enemas by an ordinary syringe could not be retained, and it was proposed to distend the colon freely by means of a long flexible tube. In attempting to pass this into the colon, I met with a difficulty which I had frequently encountered in similar attempts.

When the tube reaches the angle which the intestine makes, in passing over the psoas muscle and common iliac artery, it meets the side of the gut, nearly at a right angle, and after forcing the intestine before it as far as its loose folds at this point will allow, the tube is doubled upon itself, some two or three inches from its point, and broken. That this is the nature of the difficulty, which frequently occurs in passing a flexible tube into the colon, I have satisfied myself by laying open the abdomen of the dead subject, and introducing it with the intestine exposed to view. Indeed, I think it requires especial good luck, as well as dexterous manœuvering, to be able in all cases to pass an elastic gum tube into the colon, although, from the representations of Mr. O'Beirn and some others, it seems quite otherwise.

In order to satisfy myself whether there was any unnatural obstruction in this case, I took a common rectum sound, and passed it into the colon without difficulty. It now occurred to me that a flexible metallic tube, made in shape similar to the sound, might be introduced without trouble. I accordingly prepared one the size of a large catheter, with an egg-shaped bulb upon the end, pierced with several holes like the tube of the womb-syringe—passed it into the colon, attached it to the tube of Reed's double valve pump, and gradually distended the colon with a mixture of castor oil ℥iv., spts. turpentine ℥i. and five pts. warm water. This soon passed off, and with it a large quantity of dark fæcal matter, containing several balls of black, hardened fæcal matter, about the size and in appearance not unlike the black walnut. The evacuations were attended with alarming fainting, but were soon followed by relief from all pain and threatening symptoms.

The three preceding cases, I apprehend, furnish us with examples of the most common causes of acute inflammation of the cæcum, viz: foreign indigestible substances, or hardened fæcal matter, impacted in the caput coli.

Mr. John Burne, Physician to the Westminster Hospital, in an article published in the 20th vol. of the Medico-Chirurgical Transactions, has given a history of eight very interesting cases of this disease He tells us he has seen not less than twenty cases, in all of which he has not seen a single example of idiopathic inflammation of the cæcum from the ordinary general causes—exposure to the vicissitudes of weather, &c. "But every instance has been symptomatic of some mechanical exciting cause, as the lodgment of undigested food, of fruit stones or of concretions which the structure of the cæcum and appendix favors; and hence the peculiar features of the disease." It not unfrequently happens, that after an attack of acute inflammation of the cæcum, induced by some foreign substance impacted in its cavity, the natural powers of the organ are but slowly regained; hence it is subject to renewed attacks from any trifling error in diet, or slight exposure to cold. Such cases often become exceedingly troublesome and difficult to manage. The following is an instance of the liability to a recurrence of this kind:

Case V. On the evening of June 13, 1843, Miss E. J. W., aged 17, was seized with pain in the bowels, which was attributed to her having eaten freely of unripe gooseberries during the preceding afternoon. I saw her early on the morning of the 14th. Her countenance was indicative of severe suffering. She had taken a full dose of Gregory's Mixture (magnesia, rhubarb and ginger), which was rejected. The pain was referred to the umbilical region; pulse 88, full and sharp; pres. V. S. ℥xx. calomel gr. 10. Morphine gr. 1-4. Hot fomentations to the abdomen.

I saw her again in three hours. Her medicine had been retained, although there had been some retching. Pulse 84, pain somewhat abated; pres. cal. 5 grs. Morph. 1-3 gr. Fomentations continued.

3 o'clock, P. M. She complains much less of pain. Skin moist; tongue slightly coated with moist white fur; pulse 84, soft; pres. half a Seidlitz powder, to be repeated every hour, in hot water. Fomentations to be continued.

9 P. M. Medicine has been retained, but there has been no motion of the bowels. Slight pain still complained of in the umbilical region. Abdomen soft; moderate pressure occasions no pain except over the cæcum, where there is an evident fulness, quite tender to the touch. Pres. an enema of castor oil and warm water, to be administered directly. Cal. and Dov. powd. each grs. iii., to be given every four hours. Fomentations to be continued.

15th. She has passed a comfortable night; had a slight motion of the bowels soon after the enema, with some dark fæcal matter. The pain has entirely receded to the right iliac fossa, where it remains constant but not severe. Soreness not diminished; tongue more thickly coated, but white and moist. Pres. blister over the cæcum. Half a Seidlitz powder every hour and an enema to be repeated every third hour, until free evacuations shall be procured.

Evening. She has had several small evacuations of a greenish fluid, with no solid fæcal matter. Pres. 5 grs. Dov. Powd., to be given every three hours. Simple dressing to the blister, over which is to be laid a warm bran poultice.

16th. She has had a quiet night, free from pain. Skin moist. Pres. The following enema to be administered directly: Castor oil ℥ ij., spirits turpentine ℥ ij., warm water two pints.

2 P. M. In the course of the forenoon, she had several evacuations of dark fæcal matter in which there were several hard masses containing portions of several partially digested gooseberries. Pres. Half a Seidlitz powder every two hours.

Evening. She has had several evacutions of greenish fæcal matter during the afternoon. Pres. 5 grs. Dov. Powder.

17th. Convalescent.

On the 8th of June, 1844, a similar attack occurred after eating unripe, or but partially ripened cherries. Under a similar course of treatment she got relief on the 4th day after the attack, but the soreness and tumefaction subsided much more slowly than in the first instance.

On the 14th of Sept following she was seized in the same way—but the case proved much more obstinate than in either of the former attacks, yielding to the treatment on the 15th day after its commencement.

On the 3d of Dec. of the same year, she had a recurrence without any known cause, except a bad cold, under which she had been suffering several days. This lasted until the 21st, or eighteen days from its commencement. From this time until the following spring, she was constantly troubled with constipation of the bowels, attended with flatulence, together with more or less tenderness and pain in the cæcum and ascending colon. Her general health suffered materially until the 23d of April, 1845, when she had another attack, attended with more acute inflammatory symptoms than either of the former, involving the peritoneum to considerable extent. This occurred in three or four hours after eating boiled cabbage. By the use of an emetic most of this was thrown off from the stomach, in an undigested state, together with a quantity of green bile. The inflammation subsided, under active treatment, in the course of six days, and the bowels slowly regained their natural powers so far as to be comfortable under a carefully regulated diet, with the occasional use of tonic laxatives.

We occasionally meet with instances in which the vermiform appendix seems to be the principal seat of the primary disease. This is generally occasioned by the accidental intrusion of some small, hard substance into its cavity, which its free communication with the cæcum readily allows; while there is no way of escape but by a retrograde movement. Whether this organ has the power of expelling offending matter in this way or not, it is well known that they sometimes become impacted in this narrow tube, giving rise to irritation and inflammation, which result in perforative ulceration of its coats with most disastrous consequences.

Mr. Copland mentions having seen four cases of this description, where the appendix was primarily and chiefly affected, owing to hard substances having escaped into it. All of these cases terminated in general peritonitis and gangrene of the appendix.

It appears from his description of this affection, that in the cases which he has seen, the symptoms from the beginning were more acute than in inflammation of the cæcum itself.

Two well marked instances of this affection have fallen under my observation, one of which was occasioned by the presence of two biliary concretions lodged in the appendix. The symptoms in these cases were less urgent than in those related by him; although the sequel was the same.

Case VI. This occurred in a young man about 17 years of age, while attending school at the Canandaigua Academy. I first saw him on Tuesday, June 6, 1837. He complained of sickness at the stomach, and pain in the umbilical region. He attributed his illness to the eating of oranges on the previous evening. I gave him calomel and rhubarb, of each 10 grains in powder, and directed hot fomentations to the abdomen.

I called again in four hours. The sickness had subsided and pain somewhat abated; gave him castor oil and aromatic syrup rhubarb each 1 oz.; fomentations to be continued, and a copious enema to be administered in three hours.

7th. The bowels have been freely moved; still complains of pain about the umbilicus. On carefully examining the abdomen, I discovered tenderness on pressure deep in the lower part of the right iliac fossa; no febrile movement has manifested itself.

I applied a blister to the right ilio-inguinal region, and directed calomel and Dover's powders, each 3 grains, to be repeated every four hours.

Evening. Several times during the day he has rejected from the stomach small quantities of greenish watery fluid, which has left a slight stain upon the tongue. The blister has filled well; Dover's powder and calomel to be continued through the night.

8th. Rested well during the night; pulse 76, soft. Skin moist; thin white coat upon the tongue; not dry; no pain, but little soreness; blister looks well. I gave him ten grains of calomel to be followed in three hours, with a draught of infusion of senna and Epsom salt.

Evening. His medicine has operated several times during the day. The evacuations contain a large quantity of dark fæcal matter but without fæcal odor. He expresses himself as feeling relieved. Directed Dover's powder for the night.

9th. Had a quiet night. No pain, but some soreness in the right iliac region. Heavy white coat upon the tongue; pulse 78, soft, and yielding readily to slight pressure. Has had a small evacuation from the bowels. No fæcal odor; blister reapplied. A seidlitz powder to be given every three hours.

Evening. Bowels have been moved several times, evacuations not examined. Entirely free from pain. I spent more than an hour with him, in company with some friends, who had called on him. He left his bed and walked to his chair without assistance. Conversed freely, and desired permission to ride to his friends the next day—a distance of 10 miles—which I advised him to defer for a few days. Everything seemed quite favorable, excepting a very heavy, white, clammy coat spread entirely over his tongue. A Dover's powder was the only medicine prescribed for the night.

10th. I was called to him very early this morning, and found him in articulo mortis.

On post-mortem examination, assisted by Dr. Bristol, there was found in the pelvis about half a pint of purulent matter. The vermiform appendix presented an opening about one inch from its attachment to the cæcum, in which lay a biliary concretion about the size of a common white bean, and nearly of the same shape. On raising the appendix it separated from the cæcum, and was found in a gangrenous state through its whole extent. About half an inch above the ulcerated opening already mentioned, there was an enlargement of the appendix in which was found another concretion of about the same size and appearance. On carefully cutting open the concretions, they were found to be composed of concentric layers of dense biliary concretion around a common centre of the same material. Marks of recent inflammation were traceable to a great extent, over the peritoneum as well as the small intestines.

The most remarkable feature in this case, is the amount of organic lesion of so destructive a character, with no more urgent symptoms.

In the other instance of this description of disease to which allusion has been made, the symptoms were more nearly allied to those of strangulated hernia. The appendix was found imbedded in a mass of omentum, greatly hypertrophied, and in a state of ulceration. The cavity of the appendix was nearly obliterated by a thickened condition of its mucous membrane which had assumed a kind of firm pulpy consistence. Portions of the mucous membrane of the cæcum also presented a similar appearance.

Affections of the appendix are not generally distinguishable from those of the cæcum itself, during the life-time of the patient. We may sometimes suspect them when the seat of the affection is deep in the pelvis, as this organ is frequently found depending in this situation. This was noticed as detailed in Case VI. The soreness was deep-seated in the pelvis, which led to the suspicion that the appendix was the principal seat of the affection. Indeed the opinion was expressed before the post-mortem examination. But the situation of the appendix varies so much in different individuals, that even this sign can lead to nothing more than a mere suspicion; nevertheless, this fact is often very important in its practical results.

In the dissections which I have made, I have not discovered much uniformity either in the size or shape of the appendix, or of its place of origin, nor of the direction which it takes on leaving the cæcum. Among my dried preparations, I have one colon of common size, in which the appendix measures six and a half inches in length, and nearly half an inch in diameter; passing off nearly in a straight line from the most depending point of the caput cæci, the extremity of the appendix resting on the floor of the pelvis. I have another colon of equal size, in which the appendix is less than two inches in length, and no thicker than a crow's quill. This has its origin just at the margin of the ilio-cæcal valve, is coiled upon itself, and firmly bound to the cæcum by a fold of peritoneum. In another specimen, the appendix measures four inches in length; has its origin within half an inch of the termination of the ileon and makes a turn round this intestine, firmly embracing it. I have preserved nine preparations of the cæcum and appendix, all of which vary materially in their form and construction, so that no general description will answer to any two of them

Dr. Burne observes, that "The conformation and situation vary much in different individuals—a fact not noticed by anatomists, but which I have found to influence the phenomena and nature of its diseases very considerably. The conformation of the appendix is generally described as flexuous; and its situation as depending into the pelvis ; but by some the situation is not noticed, further than that the appendix arises from the cæcum, and is bound down to it on the right by a fold of peritoneum, the meso-appendix ; whereas the appendix is more frequently situated on the outer edge of the psoas magnus, on the fascia iliaca, snugly curled up beneath the cæcum, and concealed by it—a fact which I have verified by many dissections, and one of great importance to the pathologist, as will be seen. In the event of a perforative ulceration of the appendix, and a consequent peritonitis or fæcal abcess, the parts involved will differ entirely, according to the situation of the appendix. If it should happen to depend into the pelvis, then the pelvic viscera will be implicated ; if it should happen to be situated on the iliac fascia, and underneath the cæcum, then the belly of the iliacus internus and the neighboring adipose cellular tissue will be involved, and the course of the abscess be determined accordingly : so important is the relative anatomy of even inconsiderable organs to the physician."

The foregoing cases are selected from eighteen well marked instances of this class of affections which have occurred under my own observation during the last fourteen years. I met with several other examples of this disease during the earlier years of my practice, of which no notes were made at the time. I have also occasionally seen cases in consultation with neighboring physicians, so that abundant evidence is afforded of their frequent occurrence, at least in this section of the country.

They are spoken of by some medical writers as being obscure in their origin, and often difficult of detection. Professor Albers, of the University of Bonn, makes the following remark, " That the diagnosis of the diseases of the cæcum is attended with no inconsiderable difficulty appears from the well known circumstance, that very often they have never been suspected to exist during the life of the patient, and have been discovered only on dissection."

Dr. Burne remarks, that " A practitioner who witnesses one of these cases for the first time, is satisfied it is not a common inflammation of the bowels, although he does not know its exact nature—he says the case is a curious one—he cannot make it out."

Dupuytren, in speaking of the importance of a correct diagnosis in these affections, says, " I have seen this inflammation give rise to the belief of the existence of internal strangulation, hepatitis, metritis, and even peritonitis." That these affections are sometimes mistaken for common inflammation of the bowels, or " Bilious Colic," I am fully aware, having been consulted in four well marked cases, the true nature of which had been entirely misapprehended. One of these terminated in the usual way by resolution—the other three were allowed to pass on to suppuration, one of which terminated fatally, the abscess bursting into the peritoneum. The other two cases opened externally, a little above the crural arch, one of which formed ill-conditioned sinuses which remained open more than a year—and finally recovered.

The causes of failure in diagnosis are probably owing in part to the mildness of the earlier symptoms, which attract but little attention from the patient or physician ; but principally to the fact, that the pain attending them is generally described by the patient as a colic, and is frequently referred to the umbilical region, or to the abdomen generally. Indeed it is very rare that the patient directs attention to the seat of the disease.

It is only by a careful examination that the nature and seat of the difficulty are detected. By gentle pressure or percussion over the surface of the abdomen, as you approach the right iliac region, the patient shrinks from you, or perhaps instantly seizes your hand, and betrays surprise at the discovery of such exquisite tenderness.

Hence the importance of carefully examining every part of the abdomen, in these, as well as in all other affections of the abdominal viscera.

If we take into consideration the situation of the cæcum, fixed as it is in the parietes of the abdomen, admitting of no considerable variation in its relative position with regard to the other viscera, it must be evident, that with such an examination the disease under consideration would seldom escape early detection.

The progress of the phenomena as developed in these affections, is thus described by M. Dupuytren: " After some error in diet, a constipation or diarrhœa, of longer or shorter duration, more or less habitual colic; sometimes without any of these causes, the patient suffers from violent colic and pain in the bowels, with a tendency to concentration in the right iliac fossa; it may also extend towards the large intestine, or over the whole abdomen. This colic is generally accompanied by constipation, and sometimes vomiting; such are the symptoms by which we may predict the occurrence of the tumor. They are of very various duration; sometimes lasting for a month or more, sometimes for a few days only."

Dr. Hays, Editor of the American Journal of the Medical Sciences (see Medical Essays, vol. 1, page 81, published by Lea and Blanchard, 1841), says: " the disease usually announces itself by certain *precursory symptoms*, as colic, with alternate constipation and diarrhœa, occurring at longer or shorter intervals, and continuing for a greater or less period. After a while the attacks of colic become more severe, and appear to centre in the right iliac fossa; they may also radiate in the direction of the great intestine, or spread over the whole cavity of the abdomen. These pains are usually attended with obstinate constipation, and sometimes with such violent vomitings as to simulate an internal strangulation. In some cases the disease has its origin, is attended with less violent symptoms, and commences with pain in the right iliac fossa. If this region be examined, it will be found more tender to the touch, more resisting, and sometimes to project more than in the natural state. It is frequently possible, by pressing upon the abdominal parietes, to distinguish a circumscribed tumor of variable size, of considerable firmness, more sensible to the touch than any other part of the abdomen, and appearing to rest upon the cæcum; the remainder of the abdomen is soft and indolent. The patient continues at the same time to complain of colic and constipation."

Dr. Burne, in the papers to which we have already alluded, gives the following graphic description of these affections: " In all the examples of inflammation of the cæcum, which I have witnessed, the development of the symptoms has been in the following order: The first sign is a sense of uneasiness, which soon amounts to an aching pain, deep-seated in the right ilio-inguinal region, arising unexpectedly while the person was in health, and not preceded by rigor or exposure. This pain increases progressively for twelve or twenty-four hours, retains its character, is fixed and constant, never even remitting. Then supervene gradually tenderness, fullness, and tension of the whole ilio-inguinal region; the bowels are constipated and do not reply to medicine, and the patient grows sick and vomits. Some febrile movement now begins to manifest itself; the tongue becomes white and furred; the urine scanty; the appetite is gone; the pulse is frequent, tight, and sharp, with increased volume, but the stroke, though sharp, is not strong, nor is its impression on the finger decided—it is a pulse of irritation and inflammation combined; the patient lies on the back quite still, slightly inclined to the side affected, and the case presents a serious aspect."

The above is certainly a faithful delineation of most of the symptoms which are usually manifested in these cases, but these phenomena are most invariably *preceded* by a series of "*precursory symptoms*," as noticed by Dr. Hays.

By referring to the cases detailed by Dr. Burne, it appears that no one of them came under his observation earlier than the fifth day after the attack; a circumstance which fully explains the cause of his having failed to notice the *symptoms*, which usually precede what may be considered as signs, peculiar to these affections.

Instead, therefore, of waiting for the development of local signs, these symptoms should at once awaken our suspicions, and if we are led by them to a careful examination of the abdomen, we may, even before the attention of the patient has been directed to the part, discover a circumscribed fullness, well defined, and quite tender to the touch, situated over the cæcum. It is during the prevalence of these earlier symptoms, that a well directed treatment will often prove most successful.

The course of practice which I have found most successful in these cases, previous to the development of inflammatory action, is a free use of calomel and opium, together with warm fomentations to the abdomen. When the system is fully under the influence of opium—pain and spasmodic action having subsided—an enema of castor oil and spirits of turpentine, in a sufficient quantity of warm water to freely distend the colon, will generally succeed in removing the offending matters. By thus removing the cause of the difficulty, we may often avoid the more serious character of these complaints. If, however, this course proves unsuccessful, and inflammatory action supervene, it must promptly but cautiously be met; and here I cannot do better than to commend as worthy of special attention, the following judicious observations of Dr. James Johnson. "As the inflammation is the result of a mechanical source of irritation, or, perhaps, obstruction, it is obvious that depletion must not be carried to so great an extent as in idiopathic enteritis. Another consideration which should moderate the employment of depletory measures, especially of local or general blood-letting, is the reflection that the patient may have to go through an iliac abscess, and that his powers should be husbanded for its support. The depletion, then, should be cautious; enemata, and such purgatives as the stomach will bear well, should be administered; light poultices and fomentations are to be applied; and about the fifth or sixth day the bowels may begin to act, and the symptoms to subside. Should they not subside, the physician or surgeon must anxiously watch for the first appearance of an emphysematous tumor, and make an early incision into it; fœtid gas escapes, and the cellular tissue is more or less sloughy, or actually sloughing. The patient must now, of course, be supported, and even stimulated, to the necessary pitch."

There seems to be some difference of opinion among practitioners, as to the propriety of opening these abscesses after suppuration has taken place. M. Dupuytren and Dance recommend leaving them to the efforts of nature, allowing the matter either to make its own way to the surface, or to escape through some of the natural passages; while on the other hand, Drs. Hargrave and Kennedy, of Dublin; Drs. Johnson and Copland, of London; and Dr. Hays, of Philadelphia, advise a free opening for the exit of purulent matter, as soon as a tendency to the surface is evident. There can be no doubt that the latter course will be sustained, when experience shall have decided their relative advantages.

We occasionally, in these cases, meet with an exceedingly irritable condition of the rectum. Under these circumstances, an enema, by a common syringe, will not be retained in sufficient quantity to be of much advantage. We may then resort to the use of an elastic tube, passed high up into the colon, as recommended by Dr. O'Beirn.

I have during the last two years made use of the tube described in connection with Case IV., which I have found in some respects preferable to the common elastic tube. Its advantages consist in its being of sufficient firmness to retain whatever shape or course we may choose to give it, previous to its introduction, while the bulb at its extremity is not liable to be obstructed in its passage by the loose folds of the mucous membrane; we consequently avoid all danger of breaking the tube, or of injuring the coats of the intestine.

In detailing the foregoing cases, I have appended occasional remarks; not, however, for the purpose of offering to the profession anything new, but rather with the intention of directing the attention of the readers of your Journal to a class of affections which are scarcely noticed in the systematic works which constitute the libraries of most country practitioners; and also of inviting their attention to the articles from which I have drawn so largely in preparing this paper.

Art. VII.—*Memoirs on the Blind Fishes and some other animals living in the Mammoth Cave in Kentucky* (*with a plate*). By Theo. A. Tellkampf, M.D.

The celebrated Mammoth Cave, situated in Edmonson county, Kentucky, has long been known to the Aborigines of that country, and subsequently to the white settlers; yet it is only within a few years that the dark recesses of that vast subterranean labyrinth have been explored, some of which have recently been penetrated to the distance of twelve miles, without arriving at their extremities. At a distance of about five miles from the entrance of this cavern, which opens towards the south, facing Green River, the curious adventurer reaches a body of water, extending itself in one of the branches, nearly horizontally, for a mile or more. This collection of water has generally been considered as a river, and from its peculiar situation, has been named the "Styx." In the rainy season, which usually occurs in winter and spring, the water is muddy, and sometimes rises from thirty to forty feet, flowing in a northerly direction, and finally disappears among the somewhat inclined strata of carboniferous limestone of which the bed and walls of the cave are formed. During the summer and autumn, after the water has fallen to its lowest level, and the clay has subsided, it is perfectly clear. When I visited this cave in October, 1842, there was not the slightest perceptible flowing of the water, which was of a temperature of 57½° F., while that of the air was 56°, and which covers the bottom to a depth of five to eight feet.

In searching for vegetables and animals in this cavern, not the slightest vestiges of the former were to be found ; but it contains several species of fish, crabs, insects, spiders, etc., and these, in general, appeared to be imperfectly formed. The one, commonly known by the name of the "Blind Fish," has already called forth several communications, which, however, are not so complete as to set the subject at rest, particularly in regard to two very important points, namely: its asserted *absence* of *eyes*, and its *classification*. Wyman, in Silliman's "American Journal of Science," for July, 1843, has given in most points, quite a good description of this fish, with some interesting anatomical details. This communication is reprinted in the "Annals of Natural History," vol. xii., 1843, p. 298 ; and DeKay mentions it in the "Natural History" of the State of New York, in which he calls it *Amblyopsis spelæus*. Some remarks by Thompson, on the blind-fish, a species of crab, and a cricket, found in this cave, are also given in the above-named journal, vol. xiii., 1844, p. 112.

Besides the colorless blind-fish, there are also others found in the cave, which are black, commonly known by the name of "Mud-Fish." I saw a dark-colored fish in the water, but did not succeed in catching it. The latter are said to have eyes, and are entirely dissimilar to the blind-fish. I saw several white crabs, some of which were taken. The motion of the gills, and also of the internal organs, was distinctly seen through the transparent shell of a young specimen, hardly an inch in length, while in an older individual it appeared perceptible in a less degree. The *Astacus pellucidus* (Nobis) is nearly allied to the *A. fluviatilis* of Europe, but does not attain the same size The claws (*mani*) of the first pair of feet are delicate and slender, the foremost joint a little curved, and slightly serrated. The eyes do not protrude, but are hidden under the shield of the head. The antennæ are long and very fine. The first joints of the two pair of feet next to the hindmost ones, have on each of their anterior edges, a slightly curved horn, directed forward and inward, those of the hindmost pair being imperfectly formed. Thompson says, that these crabs are the same as the *Astacus Bartoni ;* but, on examining the two, a visible difference will at once be perceived.

A species of cricket, which the last named author mentions, and which he considers as related to *Phalangopsis longipes* (Audinet Jerville, Histoire naturelle des Orthroptères), are very abundant throughout the cave.

There are also found in the cavern :

Small white eyeless spiders, *Phalangodes armata* (Nobis) of the order Opilionia ; and *Anthrobia monmouthia* (Nobis) of the order Aranina.

Flies of the genus Anthomyia.

Triura cavernicola (Nobis) of the class Crustacea, and order Malatooth costraca.

Eyeless beetles, Anophthalmus, which coincides remarkably with the *Anophthalmus Schmidtii*, from the Luegger cave, described by Sturm in "Deutschlands Insekten," Bandchen xv., 1844, with the exception of the tooth on the middle of the inner edge of the maxilla.*

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* ANOPHTHALMUS TELLKAMPFII.—A. testaceus, thorace oblongo subovato, elytris substriatis, bipunctatis.—Long. 3 Lin.

Although nearly allied to the *Anophthalmus Schmidtii* of Sturm (Deutschl. Ins.

Adelops hirtus (Nobis), Clavicornes; related to Catops. Of the latter only one specimen.

For a minute description, and the particulars concerning these insects and crustaceous animals, which I have given, the reader is referred to Wiegmann's "Archiv für Naturgeschichte," X. Jahrg. 1 Bd.

I have examined the water of the cavern for animalculæ, and have shown some hasty sketches of them to Professor Ehrenberg, of Berlin, Germany, who has furnished me with some remarks concerning them.

In the furthest grotto, "Serenas Bower," nine miles from the entrance of the cave, are found some animalculæ, resembling *Monas kolpoda*, *Monas socialis*, and a new species, similar in external form to the Bodo.

The water of the "Styx" contains a chilomonas, which also appears to be new. Ch. emarginata, elliptic, irregularly sinuated, with a projecting lip; and besides, another species resembling the *kolpoda cucullus;* possibly it might have been the *chilodon cucullus*, which is very common in mines.

The blind-fish is found solitary, and is very difficult to be caught, since it requires the greatest caution to bring the net beneath them, without driving them away. At the slightest motion of the water, they dart off a short distance and usually stop. Then is the time to follow them rapidly with a net, and lift them out of the water. They are mostly found near stones or rocks which lie upon the bottom, but seldom near the surface of the water.

The color of the blind-fish is naturally white. The head is broad, slightly convex towards the snout, and perpendicularly compressed. The breast is round, and the other part of the body gradually diminishes both in height and thickness: but behind the abdominal fins, it is compressed. Its vertical and transverse diameter in the region of the pectoral fins, is one-sixth of the whole length of the fish, if reckoned from the extremity of the snout to the commencement of the caudal fin. Its greatest height is in the abdominal region, at a point two-fifths of the length of the fish, reckoned from the extremity of the snout. Its height before the caudal is one-tenth, and its thickness one-twenty-fifth of the length. The head in the middle is somewhat broader than the breast, but becomes smaller towards the snout. It is nearly half as high as it is long, and its length is contained three and a half times in the entire length of the fish. It is covered with a naked white skin, which is raised in numerous small longitudinal and transversal folds on the upper and under sides, particularly towards the snout. These folds are fringed, and without doubt, serve as organs of touch. The lower jaw projects beyond the upper one, and forms horizontally a semi-circle. The curve of the mouth is the same as the maxillaries; the mouth extends across the whole breadth of the head. The upper jaw is formed mostly by the intermaxillaries, which, like the lower maxilla, have small, pointed, hetchelformed teeth curved inward, lie in parts adjacent to the maxillar bone, outwardly to the angle of the mouth. The snout is inextensile. The palatine bones support a fascicle of fine pointed teeth, but on the vomer are none. The tongue is smooth; four arches of the gills, more broad than thick, support on the anterior small, and on the posterior larger

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xv., S. 303,) which lives in the Luegger cave in Inner-Krain, yet it is clearly distinct as a species, by the form of the shield of the neck, which is not cordiform, but oblong egg-shaped, by broader and more rounded wing-cases, and at least to judge by Sturm's plates, by longer and finer limbs, that is, legs, antennæ palpi, and even mandibles and maxillæ.—*Erichson.*

hemispherical bones, the entire convex surface of which, under the microscope, appears armed with minute slightly-curved horny teeth. The superior and inferior jugal bones are also armed with fine, but somewhat larger teeth.

The anterior openings of the *nostrils* are situated very near the mouth, and are surrounded by a tubular process of the skin, the length of which is equal to the distance of the anterior, from the posterior nostrils. The distance of the anterior nostrils from each other, and that of the posterior from the anterior, is nearly the same, and is less than half of the breadth of the mouth. The posterior nostrils are surrounded only by a very slight elevation of the skin, are crescent shaped, with the angles directed towards the mouth, and are enlarged angularly in the middle. If the skin of the head be removed, the great muscles of mastication and of the occiput will be seen first, between which and the frontal bone will be found a bluish-white cellular tissue, in some parts of a yellowish tint containing fat. The nerves which pass through it, are those of the muscles and of the skin. Numerous fine nerves lead from the trigeminus to the fringed folds of the skin, and to the skin of the head generally. The want of eyes appeared to be certain, as had been stated by all former observers. The fact, however, that heretofore no positive case of eyeless fish has been found, and that even with the Myxinæ, a very minute organ containing a nerve and situated under a superficial layer of muscles, must be regarded as an eye, should make observers careful. I did not succeed with two specimens which I dissected, in detecting even the vestige of an eye. With a third specimen well preserved, which I examined with Professor J. Müller, of Berlin, Germany, we succeeded in discovering a small rudiment of an eye, which we could perceive through the skin by means of a powerful lens, as an extremely small black point. It was situated under the skin in a comparatively large cavity filled with cellular tissue, covered by the external skin. Its form was round, one-twelfth of a line in diameter, and was entirely black without a cornea. Under the microscope nothing further could be ascertained than that the pigment forms the most external layer, under which lies a colorless membrane. With regard to the contents of the eye, we could not determine upon anything with certainty. This kind of eyes among fishes, therefore, stands like those of the *branchiostoma lubricum*, and like the eyes of some worms, appears only designed for the perception of light generally, but not for the perception of images. In the cranium I succeeded in following up a very small nerve in a direction towards the eye, which we had not seen in the orbits. The black point is seen on both sides in a similar position.

Four gills, double arched. False gills, none.

The openings for the branchia are moderately narrow, and extend from two-thirds of the height of the body to nearly the middle of the throat. The membranaceous skin of the gills has six arches, and is attached to the middle line of the isthmus. The gill-cover (*operculum*) does not show any processes.

The *pectoral fins* are situated over the lower third part of the height, are oblong-oval, with ten articulated rays, increasing in length towards the middle.

The *abdominal fins* are situated near to each other in the middle of the body, each containing four rays. They reach beyond the base of the anal fin ; and are one-tenth of the length of the fish itself.

The *dorsal fin* is three-fifths of the length of the body from the anterior edge of the lower maxilla, and consists like the other fins, of articulated rays, ten in number, the first two of which are undivided. It is somewhat longer than the pectoral fins, being of the same length as the caudal, and is situated above the anal fin, a little forward of it.

In the *anal fin*, I counted ten rays, the two anterior undivided, all articulated, and of the same length as the pectoral fins.

The *caudal fin* consists of eighteen rays, is of a lanceolate shape, and is of the same length as the head.

The back and the sides of the abdomen are longitudinally furrowed. The lateral line runs from two-thirds of the height somewhat downwards, and then divides the body into two similar parts. As I did not perceive any pores in this line, I came to the conclusion that it is simply a furrow caused by the position of the muscles.

The *anus* is a small opening, the inner edge of which is sinuated and located before the pectoral fins. Between the posterior and inferior extremities of the gill-cover (operculum). Directly behind the anus, is the common external opening of the *vas deferens*, and of the bladder. This opening is situated in the middle of a small elevation of the skin, and is scarcely visible to the unaided eye.

B. 6. P. 10. V. 4. D. 10. A. 10. C, 18.

The *head* is scaleless.

The *scales*, which cover the body, with the exception of the skin where the fins unite, are very small, oval, with perfect edges, are grooved ; and on the part inserted into the skin the striæ are interrupted by radiating lines. (See Fig. 5.) When preserved for some time in alcohol, the frontal bone can be seen through the soft, semi-transparent skin, which covers the head, and in one specimen, the cerebrum could be distinctly seen.

The *pharynx* and the œsophagus are longitudinally folded down to the cardia, which folds rise considerably inwards. At the cardia the thick folded mucous membrane of the œsophagus passes over in the somewhat thinner and less folded membrane of the stomach. The stomach has a fundus, is oblong-oval, and descends on the left side of the abdomen two-thirds the length of the ventral cavity.

The *pylorus* is situated at the inferior edge of the stomach, and is marked externally by a slight contraction. It consists of a short canal with thickened coatings, which was, in the specimen examined by me, one-twelfth of an inch in length, and was covered towards the stomach by a thin valve, which closed the opening from the front, and particularly from one side. The inner membrane of this canal is longitudinally folded, and reaches as a circular fold into the duodenum, which returns underneath the stomach and œsophagus towards the diaphragm. This fold of the mucous membrane, in protruding into the duodenum, serves as a valve, which closes the pylorus against the contents of the intestines. The duodenum, as well as the intestines, are thinly coated. Under the mucous membrane, particularly in the duodenum, lie here and there small globules of fat, especially where the cæca are united to the duodenum. The number of the cæca appear not always to be the same. In one specimen I found two wide, and in another three small cæca.

The *duodenum* is wide, and turns, as before observed, in a straight line underneath the stomach to the liver. The intestine bends above the anus towards the right side, then returns to the middle of the cavity of the abdomen, thence towards the left, and finally towards the front directly to the anus. The liver is moderately large, with a parenchyma of tolerable consistency. It is divided into two lobes, the left of which is by far the largest, and reaches to the extremity of the stomach. Its external surface is convex, its inner, concave, with the anterior portion broad, and the posterior small, long, and pointed. The right lobe consists of two very small trilateral lobes, one-half as long as the left lobe, one situated underneath and between the loop formed by the intestine and the rectum, and the other between the intestine and the external parietes.

The *gall-bladder* lies underneath the liver, more on the left than on the right side of the ventral cavity, between the air-bladder, the stomach, and the rectum. It is moderately large, pyriform, with the short ductus choledochus opening into the duodenum, near the place where the last cæcum is annexed.

The *spleen* is of a loose texture, lobed, of a brownish color, and is situated near the spine, on the right side, between the extremities of the stomach, and the intestines, under the air-bladder, with which it is connected by cellular tissue.

The *testicles* consist of two small oblong pointed bodies, located in the longitudinal diameter of the cavity of the abdomen; scarcely reaching down to the middle. They are found in the middle of the lower surface where the vas deferens lies slightly furrowed longitudinally. The latter organ empties itself behind the anus into the excretory duct of the bladder.*

The *kidneys*, which are oblong and very small, are placed in the posterior part of the ventral cavity, above the air-bladder, along each side of the spine, with their short duct emptying into the posterior extremity of the urinary bladder.

The *urinary bladder*, elongated, occupies the lowest part of the abdomen, in the longitudinal diameter, the posterior part of which terminates in a point. It turns upwards around the air-bladder, receiving the duct of the kidneys, and in front, gradually extends itself into a long canal, which opens directly behind the anus.

The *air-bladder* is simple, without otolithes, and occupies the whole superior part of the cavity of the abdomen. Its external fibrous membrane is compact and of a greyish color. The inner membrane forms, in the middle, a vertical partition, which divides it into two parts. It is also longitudinally divided nearly in the middle into two horns diverging towards the front; gradually decreasing in circumference, they run to a point, and are connected by cellular tissue on each side with the pharynx and the diaphragm.

From the middle of the lower surface runs a fine fibrous ligament, in a straight line, to the rectum, with which it is connected on its lower side between the valve of the rectum and the anus.

From the middle of the superior surface of the air-bladder, two rather strong muscles run out near each other, and between these runs the small canal of the air-bladder towards the pharynx.

The *peritoneum* contains a hard fat, which occurs in large and small globules.

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* According to Thompson, the fish is viviparous. One specimen which was caught and placed in water, produced twenty young ones, about one-third of an inch long. They swam about at first, but soon after died.

The *heart* is oval, pointed towards the front, with the bulbus aortæ conical, and is twice as long as broad. The auricle opens in the superior posterior side of the ventricle, and lies directly underneath the union of the processus coracöidei.

The *brain* is similar to that of fish in general. There are lobi optici, but not much developed, so that they are exceeded by the lobi hemisphærici. (For details, see the explanations to fig. 4.) The *ear* contains two otolithes.

The length of the largest specimen, from the snout to the extremity of the caudal fin, is four and one-half inches.

The nourishment of these fish consists, probably, of insects, and other animal matter, brought to them by the water flowing into the cave from without. I thought that I recognized in the stomach of one, some remnants of insects. The eggs of the crabs which inhabit the cavern, no doubt, constitute a portion of their food.

The fish, according to its anatomical structure, and the position of its fins, belongs to the order Malacopterygii abdominales; but it does not correspond with any of the families of this order, at present known. It does not belong to the Silurōides, because it has scales and no filaments (*cirri*). It differs, also, from the Cyprinodontes, from the fact that the stomach has a fundus, and the intestines have cæca; from the Clupeæ, as it has no false gills. In its anatomical structure, however, it has some resemblance to the family of the Clupesoces, which Müller characterizes, "Beiträg zur Kenntniss der natürlichen Familien der Fische" (Wiegm. Arch., 1843, p. 325), in the following manner: Fish without adipose fins and false gills, with the mouth enclosed in the middle by the inter-maxillar bones, and on the sides by the superior maxillar. The cæca, very small in number, or entirely wanting.

This coincides, in general, with our fish, with the exception of the maxillaries; for the superior maxilla is situated rather *behind* the intermaxillar bone, parallel with the latter, than being a continuation of the same. But what separates the blind-fish from this, as well as from all other families of the *Malacopterygii abdominales*, is the position of the anus before the pelvis. It is situated between the ventral and pectoral fins, or between the pelvis and the shoulder girdle, directly behind the latter. This position is so abnormal and singular, that it alone justifies the constitution of a new family, which we propose to call Heteropygii. The pelvis of our fish consists of two triangular bones, which are situated, as usual, on the ventral side of the abdomen, between the muscles, touching one another without being united by a suture. The ventral fins are connected with these bones, and, therefore, represent a symphysis ossium pubis; nevertheless, the anus and the urogenital aperture are not located, as they should be, behind the ossa pubis, but before them, directly behind the shoulder girdle, as in the Gymnotus carapus, and Enchelyopsis Mülleri, which, however, have *no* ventral fins. Notwithstanding I found the family upon but one specimen, yet I believe I am justified in so doing, and am the more confident in this matter, as it has the approbation of Dr. Troschel and Professer Müller. It is certain that among all the Malacopterygii, no analogous case is known in which the anal and urogenital artifices are situated before the pelvis and the ventral fins. There is one instance among the Acanthopterygii, mentioned by DeKay, called *Aphredoderus gibbosus*, also of North America, which Cuvier and Valenciennes have classified with the Percöides, where the ventral fins are beneath and behind the pectoral fins, and the anus placed before the pectoral fins. In the IXth volume of (Cuvier's) "Histoire Naturelle des Poissons," p. 452, are given some notions in regard to the Aphredoderus gibbosus. The rectum passes through the pelvis, and between the abdominal muscles to the anus; the pylorus has six cæca; the air-bladder is undivided, and is very large. Now arises the question whether Aphredoderus and Amblyopsis, though distinguished by the formation of their fins as Acanthopterygii and Malacoptherygii, are to be classified in the same family?

The Aphredoderus is characterized, and remarkably so, as one of the Acanthopterygii, not only by the usual number of rays in the ventral fins, but particularly as all these rays are articulated or soft. Now whether the Aphredoderus and Amblyopsis are to be brought into a new family, Heteropygii, remains to be decided. Professor Müller is of the opinion that it will depend entirely upon the fact whether the air-bladder of the Aphredoderus has an air duct or not; for not one of the Acanthropterygii has such an organ. If the Aphredoderus has no air duct, it cannot be classified in the same family with the Amblyopsis, it would then be a Heteropygius among the Acanthopterygii; the only representative of a family analogous to that of which the Amblyopsis should be the sole representative among the malacopterygii; but if the Aphredoderus has an air duct, it is certain that both fish belong to each other. The family containing them would form a family by itself, which could be classified neither with the Acanthopterygii nor with the Malacopterygii abdominales.

It is an interesting fact that animals are found in the Mammoth Cave, some with eyes, others with mere rudiments of eyes, and others again with no eyes at all: and it is no less remarkable that of two species belonging to the same class, the *Black-fish* and the *Amblyopsis*, the eyes of the former are fully developed, while those of the latter are merely rudimentary. Moreover, of two species belonging to another class, the one—the *Adelops*, has rudimentary eyes, while the other—the *Anophthalmus*, has none.

The reason of these differences, in the case of animals living in the same cave, under similar external influences, cannot at present be fully explained. The following remarks, however, are offered as a partial elucidation of the subject, especially with reference to the eye of the *Amblyopsis;* and it may be well to premise that there are two other questions closely connected with the first, and worthy of examination, viz. Have the animals found in the Mammoth Cave existed there since their creation, originally destined for that locality? Or, have they entered the cave from without?

In order to answer these questions satisfactorily, we must first refer to the geological formation of the cave.

The carboniferous limestone, in which the Mammoth Cave is situated, comprises a great many layers, varying in different localities, in thickness and consistency. (The coal-limestone of Europe is uniformly more solid.) Among the secondary rocks, it is, according to their relative age, one of the oldest. Though the formation of the cave does not date so far back as that of the carboniferous limestone, yet we may infer that it began to be formed after the secondary rocks, superior to the carboniferous limestone, were deposited and partly washed away again, and after the water had cut for itself a channel through the remaining layer of the superior secondary rocks (the sandstone), as well as through the highest layers of the carboniferous limestone. From what has been said, and from the geological relation of the layers of rocks in the great valley between the Alleghany and Rocky Mountains, we are justified in the inference that the cave had an existence previous to the mundane revolutions which gave it its present form. It is also abundantly obvious, that it must have been principally formed by water, flowing in from the sides between the layers, from the Green river, and probably from lakes which must have existed at an early period (where fertile valleys are now seen, enclosed by the surrounding plateau-land), as well as from the so-called sink-holes. It is, therefore, as possible that the animals have existed there from their creation, as that the fish and crawfish may have been carried into the cave from without by the water.

Some considerations derived from physiology however, appear to favor the latter idea. (That the (*Phalangopsis*) cricket has entered the cave, cannot be doubted. It is found throughout this and neighboring caves, for instance, in the White Cave ; and is most frequently met with near the entrances.) Respecting the *Amblyopsis*, the idea that its eye had become rudimentary from the want of light, gains some additional strength from the relative size of the lobi optici, the optic nerve, the eye and the orbita. Vide p. 87 and p. 90.

It is a universal rule in the animal kingdom, that the form of animals and their organs is adapted to the ends for which they are designed. That two species of fish should be found in the same body of water within the cave, one with *perfect*, the other with merely *rudimentary* eyes, appears to be entirely at variance with this rule ; particularly, if we remember that the eye of the *amblyopsis* is so little developed (remaining on its first type) as to correspond anatomically with the eye of worms, &c., although, as has been remarked, this fish must be classified with the higher order of pisces. Besides, the *amblyopsis* stands alone, in this respect, among bony fish. There can be no end answered, it would appear, by giving some of these animals eyes, constructed for the purpose of receiving either impressions of light or images, while the optic nerves possess no power of reaction, against their necessary stimulus—the light. It is well known that persons, who for some reason accustom themselves to the use of only one eye, lose almost entirely the sight of the other, though it continues to receive impressions of the light. This result must follow, and the effect must be stronger, if the eyes are continually inactive from birth, as is the case with all animals living in the Mammoth Cave; and as has been the case with them, generation after generation. We may assert positively, that none of them can see, except the *Phalangopsis*, which lives near the entrance of the cave. The conclusion, then, at which we arrive is this, that these animals, living in total darkness, have lost their eye-sight for want of exercise.

During my stay at the Mammoth Cave, I observed that the *Amblyopsis*, the black-fish, and the crawfish, remained motionless while I moved a burning lamp around them, but that they were disturbed by a slight motion of the water ; proving that the light made no impression upon their optic nerves, while their sense of touch was acute.

While it is true, in general, that all animals retain their essential form, and that no species passes over into another by transformation, we know that less material changes of form are produced by external influences such as change of climate or food, lasting through many generations of the same species, and that one species resists such influences more than another. Whether the *Amblyopsis* and the crawfish are to be regarded as varieties of species not yet known, must remain doubtful until such species, corresponding with them in all essential points, are found.

Change of color and transformation of the skin could be easily accounted for, as in accordance with known facts relating to the varieties of certain species of animals transported from a Northern to a Southern climate, and *vice versâ:* but the change in the eye of the blind fish is not so easily explained. We have no recorded facts, on which to base an opinion; unless we take the change of the eye, together with that of the skin and its color, which we observe in Albinos and other cases. The following facts are certainly more important.

The eyes of a young specimen of the *astacus pellucidus*, about an inch long, protrude beyond the shield of the head, while in all the older full-grown specimens, they are smaller in proportion to the body, and covered by the shield of the head. We conclude that the eye of the crawfish is not developed in proportion to the body, and that a minute examination of the eye will prove it to be defective.

Some new discoveries must be made, ere all questions are set at rest, with regard to the influence on the eye of a continued want of light, during several generations of different species The peculiar development of the eye in the animals found in the Mammoth Cave may, perhaps, indicate these effects: but we can make no positive assertion, without stepping from the field of sure investigation into that of speculative vagueness. Theories and hypotheses must pass for what they are worth, even if they have a tendency to lead to new discoveries.

Explanation of the plate.—The three drawings of the fish represent it in its natural size; the spot where the black rudiment of the eye is situated, covered by the skin, is marked by x.

Fig. 1.—*a*. Head. *b*. Teguments of the abdominal cavity, turned aside. *c*. Anal fin *d*. Liver. *e*. Stomach. *f*. Cardia. *g*. Pylorus. *h*. Cæca. *i*. Duodenum. *k*. Intestines. *l*. Rectum. *m*. Stricture of the rectum, where the valve is located. *n*. Bladder. *o*. Spleen. *p*. Testicle. *q*. Air-bladder. *r*. Anus. *s*. Common orifice of the bladder and the vas deferens.

Fig. 2.—*a*. Œsophagus. *b*. Cardia. *c*. Stomach. *d*. Fundus of the Stomach. *e*. Pylorus. *f.f.* Cæca. *g*. Duodenum. *h*. Intestines. *i*. Valve of the rectum. *k*. Rectum. *l*. Anus.

Fig. 3.—*a*. Air-bladder. *b*. Air-duct of the air-bladder. *c*. Muscles of the air-bladder, which extend from the superior surface to the pharynx. *d*. Fibrous ligaments, which proceeding from the inferior surface of the air-bladder are attached to the superior surface of the rectum.

Fig. 4.—*a*. Nerv. olfactorius. *b*. Lobus nerv. olfact. *c*. Lobus hemisphæricus. *d*. Introitus ad ventr. III. *e*. Lobus opticus. *f*. Cerebellum. *g*. Lob. medullæ oblongatæ. *h*. Nervus trigeminus. *i*. Nerv. vagus.

Fig. 5.—Scale, magnified.

PART SECOND.

Critical Analysis.

Art. VIII.—*A Practical Treatise on the Diseases peculiar to Women.* By Samuel Ashwell, M.D. Member of the Royal College of Physicians, London; and Obstetric Physician and Lecturer to Guy's Hospital. With Notes by Paul B. Goddard, M.D., &c. Philadelphia. Lea & Blanchard, 1845.

This is strictly what its title imports, viz.: a "Practical Treatise," and is one of the best among the many works on the same subject, which have recently emanated from the press. Few practitioners possess the advantages of Dr. A., for investigating the diseases of which he treats. Actuated by a laudable ambition to be useful, he felt bound to place the result of his opportunities before the public; he says in the preface, "It is now more than twenty years since my attention was particularly directed to the important branch of medical science which constitutes the subject of the following pages. During a great part of this period, Guy's Hospital with its extensive lying-in charity, and my own private and consultation practice in female diseases have afforded opportunities falling to the lot of few practitioners." The author remarks, "The disposition to publish has been strengthened by an opinion I have long entertained, that practitioners who hold important public opportunities, are bound, as far as their sources of authentic information can be made subservient, to improve and increase the common stock of professional knowledge." "The book contains little which is not the result of my own practice and observation." "My aim has been to produce a treatise on female diseases, true, simple and practical, which may form a safe and efficient guide to the elucidation of these intricate, rapidly progressing, and dangerous maladies." Pp. 6, 7.

Dr. A. divides his work into two parts. 1. "Functional Diseases of the Uterine system." 2. "Organic Diseases of the Internal and External Female Genitals." Our limits will compel us to confine our present notice to the first part. Dr. A. defines a functional disease as one "which is dependent on deviations from the natural, or healthy action of any part of the organization, indicated by symptoms during life, which after death are found to be unconnected with discernible changes of structure." P. 13.

Chapter I. *Chlorosis.*—Dr. A. makes three forms. 1. Mild and incipient; 2. moderate and confirmed; 3. complicated. The first commences almost unobserved; the patient may have been feeble from infancy, or at least, for some time previous to the development of the disease, but when arrived at the age of twelve, thirteen, or fourteen, puberty is not established; a series of distressing symptoms, as capricious appetite, languor, aversion to all exertion, constipation of the bowels, furred tongue, offensive breath, pain in the side or head, whilst the catamenial discharge is either not established, or is scanty and pale in color. In the inveterate and confirmed, all the above symptoms are aggravated. The complexion becomes more striking; it is a "yellowish dirty green," with a peculiar pallid appearance of the lips, conjunctiva, &c. "Complicated chlorosis consists in the presence in a greater or less degree of the general symptoms of the disease, with a more prominent morbid affection with some distant organ or part of the system.'

The causes of chlorosis are divided into the predisposing and exciting. Predisposing causes: a delicate, feeble and undeveloped constitution, where the circulation and nervous powers are inadequately exerted to perfect the organization of the body, in consequence of which the evolution of the ovaries is delayed, and their peculiar influence on the system, and particularly on the uterus, is withheld; thus puberty is only imperfectly, or perhaps not at all established, and menstruation, which must be preceded by puberty, is absent." In married females and widows, it is usually some derangement of menstruation. Whatever relaxes and enfeebles the system, particularly in early life, tends to produce the disease. The exciting causes, whatever tends to produce depression of spirits, or dejection, or despondency of mind, disappointment, amenorrhœa, leucorrhœa, masturbation, excessive venereal indulgences, all tend to produce the disease.

Pathology of Chlorosis.—"It may, probably, be fairly assumed, certainly it is the most prevalent opinion, that chlorosis primarily depends upon a morbid condition of the blood which secondarily affects the ovaries and uterus, and retards their growth. This opinion is supported by the fact, that in the blood of chlorotic patients there is an increased proportion of serum, with a marked diminution of crassamentum. This has always been my view of the subject." P. 19.

In his preliminary remarks on the pathology of functional diseases of the uterus, Dr. A. says, "Chlorosis ought to be attributed to an impoverished circulation, and undeveloped ovaries." The latter part of the sentence would seem to be in contradiction with a previous statement, that he had met well-marked instances of the disease in the male sex.

Diagnosis.—The author very properly cautions the practitioner not to mistake some of the symptoms of chlorosis, as head-ache, severe pain in the side, palpitation of the heart, for inflammatory affections; he says, "From want of this caution, I have witnessed the very injurious consequences of such mistakes, the practitioner having forgotten (what in female diseases it is peculiarly important to remember) that the severity of the pain, and the rapidity of the pulse, are generally indications of irritability and excitement, not of inflammation demanding narcotics, carminatives, and at the most counter-irritation; not bleeding, active purgatives and spare diet." P. 11.

Complication of Chlorosis with Amenorrhœa.—Although a frequent attendant, and sometimes a consequence of protracted chlorosis, Dr. Ashwell does not think amenorrhœa a necessary attendant, and consequently treats it as a complication.

Chlorosis may have existed previous to puberty, and have prevented that perfect development of the reproductive organs necessary to the establishment of menstruation. "Or this complication may gradually occur as the result of amenorrhœa."

This complication of chlorosis with amenorrhœa, if judiciously treated by a proper combination of tonics and hygienic means, usually terminates in re-establishment of health, and this often without a resort to emmenagogues. If permitted to run too long without proper attention, other diseases may supervene. Doct. A. says, "I have often, during the last few years, been requested to treat such patients, of whom, had I judged from what I heard, I should not have predicted any danger; and yet on careful inquiry, and sometimes at first sight, I have been convinced the case was all but hopeless." Under favorable circumstances, as change of air, exercise in the country, with a judicious course of tonics, even these protracted cases sometimes do well; but in others some vital organ becomes complicated, and the disease proves fatal complication, with a discharge of blood from the stomach by vomiting. This is not an unfrequent complication. The treatment may have been so far successful as to improve the general tone and vigor of the circulation, but the suppression of the menstrual discharge continuing, engorgement occurs in some of the internal organs, and vomiting of blood is the consequence. Sometimes this hæmorrhage assumes a prominent character, occurring once in three or four weeks. These are the cases where local emmenagogues are particularly serviceable, the quantity and quality of blood is sufficiently improved to admit of this discharge, and every effort should be made for its restoration.

Complication with derangement of the function of digestion and nutrition. In all cases of chlorosis there is more or less disturbance in the digestive organs, but in some it becomes one of the most formidable complications, and the wonder is how the patient is able to live at all. Doct. A. thinks that even in the worst form of this complication there is seldom structural derangement, and if uncomplicated, with a tendency to phthisis, we may hope for a favorable result.

Complication with functional affections of the cerebrum. We can vouch for the truth of the author's declaration, that "there is scarcely any complication more difficult to relieve than this;" as also for his very graphic and accurate description of the sufferings and agony produced by this complication. In a few instances the pain is periodical and of neuralgic severity, while in others it is so nearly constant as to preclude mental or physical exertion, and almost to induce the belief that it must be connected with organic affection. It is consolatory to know, notwithstanding the amount and long continuance of the disease for months, and in some rare cases for years, "that the cerebral structures for the most part remain unchanged."

Complication with derangement in the vascular system. Although not so frequent as some of the other complications, the symptoms are formidable in appearance, and produce great apprehension on the part of patients and their friends. "Constipated bowels and severe headaches are common circumstances, but the entire loss of the natural color of the surface, œdema of the face and extremities, palpitation of the heart and syncope, are less frequent, and wear so formidable an aspect as to excite great alarm." Doct. A. has seldom found "ascites" to exist to any considerable extent, except when connected with structural disease of the chylopoictic viscera. The reader is cautioned not to attribute every icteroid hue of skin to disease of the liver.

Complication with disease of the lungs. Chlorosis seldom terminates fatally except when complicated with phthisis, but whether the chlorosis is to be attributed to a previous debility of the system, owing to a hereditary tendency to phthisis, or whether the latter disease is called into action by the former, it is difficult to determine. Our author inclines to the opinion that the chlorosis only calls into action a latent tendency to phthisis, which previously existed in the system. In our variable climate, where phthisis is frequent and so fatal, too much care cannot be taken to guard against its first approach, and the possibility that chlorosis may produce phthisis should be sufficient to warn us against treating it with neglect. In this complication the physician should be guarded in his prognosis. One of the most favorable indications is a diminution in the frequency of the pulse. Whatever apparent improvement there may be in other respects, so long as the pulse continues 120 or 110 in a minute, there is little encouragement. "If, on the contrary, the pulse become slower, fuller and softer—if the cough be less frequent—if the pyrexia disappear, and especially if the patient gather flesh in ever so trivial a degree, hope may be entertained." "Carefully treat such an individual: avoid mercury, drastic purgatives and emmenagogues. Place her in the country where she shall breathe pure air: let her diet be simple and nutritious (milk and animal food), and her medicine some of the various tonics; and the expectation may be cherished that the time is not far distant when the sexual character will be fully developed and the dangers safely passed."

Treatment of Chlorosis. The treatment of the most common form of chlorosis must be the type of the treatment of all the rest. A grave error is not unfrequently committed in considering and treating it as a local disease, and vain attempts made to establish the menstrual discharge (as if its absence was the cause of all the difficulty) without restoring vigor to the general constitution.

At first a due evacuation of the bowels must be daily secured, and much will depend upon the kind of medicine by which this is effected. If mercury and drastic purgatives be frequently and largely employed, intestinal irritation will ensue, evidenced by unhealthy and undigested motions mixed with mucus and occasionally with blood. If the purging be excessive—if it be exclusively relied on for the cure—debility and exhaustion will result, and instead of amelioration, the whole of the symptoms will be aggravated. The best aperients are aloes, rhubarb, the sulphate of soda and manna; and if an alterative be necessary the hydrargyrum cum creta. It is superfluous perhaps to observe that warm clothing, regular exercise by walking, if it can be borne, if not on horseback, are valuable auxiliaries. Pp. 30, 31. When the deranged condition of the bowels is corrected and the tongue becomes clean (and not before), the various preparations of iron are advised; the sulphate is particularly recommended. "A single grain or even two may be given twice or three times daily, combined with extract of hop, aromatic confection, and a single grain of the extract of poppy or hyosciamus." Occasionally the iron is not well borne; then other tonics, as zinc, quinine, sarsaparilla, or gentian may be given. The iodide of iron is particularly applicable where there is a strumous diathesis, and is a favorite prescription with our author. "The iodide of iron has been extensively tried both in hospitals and private practice with undoubted success; especially when glandular enlargements and other indications of a strumous habit have been associated with the chlorosis, I give it in the subjoined form: Ferri iodide, gr. xvi. Tinct. columbæ, vel gent. c. ℥j. Aquæ distillatæ ℥vii. ft. mist. Sumat coch. ii. magna bis terve quotidie." P. 32. The chapter on chlorosis is closed by a number of interesting cases, illustrations of the practice of the author and the hospital to which he is attached, but our limits will not admit of our giving them to the reader; we must therefore refer him to the work itself.

Chapter II. *Of Amenorrhœa.*—Dr. A. divides Amenorrhœa into two varieties—1. Amenorrhœa of retention and Amenorrhœa of suppression. The first he divides into *a.* Amenorrhœa dependent on congenital deficiency or malformation, or structural diseases of the genital organs. *b.* Amenorrhœa, where, independently of deficiency of malformation, there is either a slow and partial development or an entire absence of puberty. *c.* Amenorrhœa after puberty is fully established.

In the first variety, where it arises from an absence of an organ, nothing can be done; where, from malformation, as an imperforate hymen, or an adhesion of the labia, a surgical operation may remedy the defect. We should not, however, lose sight of the fact that peritoneal inflammation is liable to follow such operations.

In the second variety, our treatment should be governed rather by the condition of the general health, than by the simple absence of the menstrual discharge. Individuals differ materially as to the age at which this discharge takes place. If there is sufficient tone and vigor of the constitution, we may expect the discharge to take place in due time, unless there is some defect or deficiency of the organs concerned in its production; and this defect cannot be remedied by medical treatment. When owing to feebleness and delicacy of constitution, the same treatment should be adopted as recommended for chlorosis.

The third variety, viz. amenorrhœa after puberty, is fully established and divided into, 1st, The too plethoric, and 2d, the delicate, irritable and hysterical. In the first variety there is headache, tremor and weight about the brain, a florid countenance, torpor, lassitude, pains in the back and loins, a full and generally slow pulse. Uterine congestion so active as to prevent the secretion of the menstrual fluid, is considered as the most frequent cause. And this may be induced by exposure to cold.

Treatment. If there is evidence of congestion of some of the more important organs, as the brain, the lungs, or liver, general bleeding, with active cathartics, must be resorted to: under other circumstances, local bleeding, with active cathartics and revulsion, may be sufficient. It is seldom that emmenagogues are needed in this form of the disease, unless, from its long continuance, it has become chronic. Amenorrhœa after puberty, is fully established in delicate, irritable and hysterical females. The treatment recommended is the same as that for chlorosis complicated with amenorrhœa.

Amenorrhœa of suppression. There are two varieties. 1. Recent and acute. 2. Chronic suppression. In acute suppression, if symptoms of inflammation supervene, active depletion must be resorted to; regulating the amount and repetition by the constitution of the patient. Caution is necessary not to mistake symptoms of irritation for inflammation; in the latter case, mild cathartics, antispasmodic anodynes, the hip bath, and particularly anodyne injections should be resorted to. When the pain is severe, Doct. A. recommends a pill composed of two or three grs. of camphor and two of antimonial powder.

Chronic suppression may result from an acute attack, or may gradually supervene from other causes. Many of the slight irregularities will be removed by time without resort to medicine. "If, therefore, the health does not suffer from the absence of the discharge, the cure may be safely left to nature, except where there is excessive leucorrhœa, which so rapidly impairs the strength that it is proper at once to attempt the removal of the suppression."

"It has been already remarked, that debility is not the sole cause of absent menstruation ; and it is peculiarly necessary in protracted suppression, before entering upon the use of stimulating remedies, clearly to ascertain whether there is not congestion or latent inflammation of the uterus and its appendages." P. 61. In the cases of inflammation or engorgement, depletion would be required. In debility, tonics and stimulants.

The author seems to doubt whether there are any medicinal agents that operate as specific stimulants of the uterine secretion ; still there are a number of agents that indirectly tend to effect the same object. Emmenagogues are divided, 1. into local or immediate, and 2. Constitutional. Of the first class are electricity, galvanism, the application of leeches to the os and cervix uteri, stimulating injections into the vagina and rectum. Stimulants have been injected into the uterus, but Doct. A. considers them a hazardous remedy, and never now resorts to them except in severe cases of uterine hæmorrhage. Of the second class, mercury is considered the most efficient. It is not to be used in slight cases, nor where there is extreme exhaustion, or predominant irritability, or a tendency to phthisical or strumous disease. But in obstinate amenorrhœa, where other treatment has failed, where there is chronic inflammation or permanent congestion, and any evidence of incipient structural change, there is no remedy comparable to this.

Iron, in its various forms, is considered a valuable emmenagogue. Of ergot, as a valuable emmenagogue, he says, "I cannot speak favorably." Iodine is occasionally a good emmenagogue. Strychnine has been tried without much success. Of madder he has not had much experience, and rue is seldom used. Savin is a suitable stimulant where there is feeble and languid circulation, but injurious where there is plethora and irritation. Snake root and black hellebore are considered as deobstruents, but not entitled to more than a passing notice. Nitre is considered a decided emmenagogue. Of the emmenagogue cathartics, aloes is considered the most important.

Vicarious Menstruation. This cannot be considered a very rare affection. When it produces neither exhaustion nor derangement of the health, it can scarce be considered a disease. It is most frequent in the unmarried ; and when it occurs in married women, they are usually barren. The discharge is usually sanguineous, occasionally leucorrhœal. The most frequent seat of the discharge is the pulmonary and intestinal mucous membrane, but occasionally the nipples, the ears, the gums, the umbilicus, the axillæ and bladder, or any portion of the skin or mucous membrane, may be the seat. It seldom observes the regularity of the menstrual discharge ; is occasionally preceded by slight pain of the part, and is not attended with danger. The treatment must be regulated according to circumstances, as in cases of suppression. Vicarious leucorrhœa is most frequent in delicate females, or those exhausted from any cause. It is, in fact, suppression with leucorrhœa, as the discharge is mucous and not sanguineous. Good air, exercise, nutritious diet, and tonics are usually necessary. The tinct. cantharides is strongly recommended by Doct. Dewees, and will often be found useful in this form of amenorrhœa.

Dysmenorrhœa. This "is an important disease. It is very common, and produces extreme suffering. It often prevents conception, and if pregnancy has occurred during its continuance, the patient is exposed to the risk of abortion. Although not in itself a fatal malady, yet it admits of proof that malignant disease has followed its protracted existence ; and lastly, it is exceedingly difficult to cure." P. 80. Doct. A. divides the disease into the "irritable or neuralgic," and the plethoric. The first occurs independently of inflammation or congestion, and is considered purely nervous. The congestive form, Doct. A. thinks, is not unfrequently produced by the improper use of emmenagogues. Mackintosh and several others attribute the disease to mechanical obstruction. Doct A. sometimes found a partial closure of the os, but its removal would not always cure the disease. Long continuance of the disease, particularly the congestive form, may produce thickening of the mucous membrane, and this produce the closure, which has, by some, been considered the cause of the disease. Doct. A. recommends that, in all difficult and protracted cases, a careful examination should be made.

Diagnosis. It is only in cases of suspected abortion that difficulty can exist.

Pathology. This is a vexed question: some authors considering it purely nervous, others that it is inflammatory. Our author believes that either of these states may exist.

Prognosis. The disease itself is never fatal, and, however great the suffering, so long as there are no indications of structural disease supervening, the prognosis must be favorable.

Treatment. "This is necessarily different." "There are, however, in the treatment of every variety, two principal indications: to alleviate the urgent pain of the menstrual period, and to employ, during the intervals of the discharge, such remedies as shall restore to the uterus its healthy secretory powers." P. 88.

In the more common or neuralgic form, the mustard hip bath of the temperature of 96 or 98, should be used on the accession of pain, continued half or three quarters of an hour, and repeated two or three times a day; when the pain is severe, half a grain of ipecacuana or fifteen or twenty drops of antimonial wine may be given. "Camphor, ipecacuana and hyosciamus; Dover's powder; the extract of hop, lettuce, conium, belladonna variously combined, relieve the pain and induce perspiration." P. 86.

When there is reason to believe there is an effort of the uterus to expel a coagula, ergot should be administered. In the inflammatory and congestive form local bleeding is demanded, and in some cases small general bleedings may be necessary. During the interval, every means should be resorted to, to improve the general health, by diet, exercise, &c., and in the neuralgic form, tonics. Dr. Ashwell has tried the tinct. of guiac as recommended by Dr. Dewees, but without much success. In the congestive and inflammatory variety, occasional bleeding is necessary, while great caution is used in the administration of tonics.

When structural changes are apprehended mercury must be used, and when the os and cervix are thickened and indurated, the iodine ointment should be resorted to.

Menorrhagia. Under this head, Dr. A. embraces both profuse menstruation and hæmorrhage from the uterus, occurring at the menstrual periods and without pregnancy. There are two forms: 1st. "Profuse menstruation as to frequency of return, or the amount of the secretion, or both, without uterine bleeding." 2d. Profuse menstruation with loss of blood. The second is divided into, 1st, acute or active, 2d, passive or chronic, 3d, congestive.

Women differ so much as to the amount of the menstrual discharge that mere quantity can scarcely determine the question as to its being profuse, but this must depend upon circumstances, particularly the effect upon the general health. *Causes.* Either delicacy and debility, or undue plethora, may conduce to the disease. In married life repeated labors and abortions, as well as all undue excitement of the genital organs, may lead to this or the other forms of menorrhagia.

Diagnosis. It is distinguished from menorrhagia with loss of blood, and from hæmorrhage attendant upon abortion by the absence of coagula.

Treatment. This must be varied; in plethoric and robust persons the discharge may be salutary, if treatment is necessary moderate v. s. previous to the expected return of the discharge; local depletion by cupping or leeches; saline cathartics, with sul. acid; nitre, &c., with a horizontal position, cold drinks and light food. During the interval regular exercise, or light diet, occasional saline cathartics, and an avoidance of all exciting causes.

In delicate and feeble patients an opposite course must be adopted during the flow; rest in a horizontal position; the internal exhibition of acetate of lead and opium, ergot, and the application of cold externally, or by injections into the vagina or rectum. During the interval such measures as will tend to invigorate the system.

Profuse Menstruation with a discharge of blood. 1. Acute or active; occurring in the plethoric and robust. In this form the menstrual periods are usually preceded by more or less febrile symptoms, with pains in the back and region of the uterus. If there is inflammation the pain will be constant; if spasmodic, the pain will return at irregular intervals. The treatment should be the same as for excessive menorrhagia, accompanied by plethora.

2. *Passive or chronic Menorrhagia.* This is much the most frequent form. *Causes.* The same as profuse menstruation.

Treatment. In addition to those means recommended for profuse menstruation, injections into the uterus have been recommended, but this is considered a hazardous remedy. Plugging the vagina, and if necessary filling it to the os uteri, and firm pressure on the pudenda, should always be resorted to in extreme cases.

3. *Congestive Menorrhagia.* Most frequent in middle life. It possesses characters differing from the other forms of menorrhagia, and may occur either in the plethoric or in the feeble and delicate. The periods of the attack are usually preceded by a sense of weight and fullness in the region of the uterus, sometimes coldness of the hands and feet, and often pain in the uterus, giving rise to apprehensions of organic disease. If the uterus be examined it will be found somewhat enlarged, and in a state of congestion. Dr. Churchill has observed that it is frequently attended with dysuria. *Treatment.* In the plethoric, moderate general and local bleeding, perfect rest during the flow, cold injections, &c.

Dr. A. thinks that avoidance of sexual intercourse, and a consequent congestion of the uterus, is not an unfrequent cause of this form of menorrhagia in married women.

Leucorrhœa. Dr. Ashwell makes three forms of this disease. 1. The common leucorrhœa, often mild, sometimes acute. 2. Inveterate and chronic leucorrhœa. 3. The symptomatic. "Of all the diseases peculiar to the sex there is none so common. Few married women, particularly if they are mothers, escape its attacks."

Dr. A. thinks it may arise from the uterus, from the glands about the neck of the uterus, or from the vagina. He considers " its mildest acute form as the result of hyperæmia or vascular congestion, whether it affects one only or all the parts." " Often in common leucorrhœa, I have examined by the vagina, but without discovering more than a trifling increase of the body of the uterus, some tenderness of the cervix in the inflammatory forms, but none in the protracted or chronic variety. The state of the cervix is occasionally soft, and the os rather patulous." P. 124. In the first form, if under the idea of its being a weakness, tonic and stimulant injections are early exhibited, the discharge will probably become more excessive, purulent, or muco-purulent, thin, watery or ichorous, and the constitutional effects more aggravated. If, on the contrary, antiphlogistic and soothing treatment be adopted, the morbid secretion will diminish in quantity and the general derangement will disappear." P. 125. In some cases the disease readily yields ; in others it is protracted and passes into the chronic form. In women who are full and plethoric, caution is necessary not to stop the discharge suddenly without previous evacuation, lest apoplexy or inflammation of some important organ should supervene.

2. *Chronic and aggravated Leucorrhœa.* In this form, the cure of the disease is often difficult and protracted.

3. *The symptomatic Leucorrhœa.* In this variety the symptoms will be nearly the same as in the preceding varieties ; hence the necessity of a careful investigation of the case.

Pathology. " There can be no doubt that leucorrhœa owes its origin to two distinct and dissimilar conditions. The first a state of hyperæmia, or increased action of the vessels of the secretory surface ; and the second debility, either original or produced by the continuance of the former state." P. 131.

The " diagnosis is sometimes difficult and particularly from gonorrhœa, where circumstances lead us to suspect the latter disease. The character of the parties, the history of the disease, the appearance of the discharge, and particularly the condition of the parts, must all be taken into consideration."

Treatment. This must of necessity be different. The various forms of the malady differ so widely from each other in degree, that, whilst in the slight, scarce any treatment at all is required, in the moderate, it is often most puzzling to find any remedy." In simple cases—rest, abstinence from intercourse (if married), animal food and wine, mild aperients, and the employment as a wash, of the liq. plumbi c. or the liq. alumen c., or the tepid poppy water, will usually in the course of a few days or a week cure the disease." In the inflammatory form, the antiphlogistic treatment must be at once commenced, and if by a vaginal examination the cervix is found swollen, shining red and tender, leeches or scarification may be used. " The hip bath, mild aperients, spare diet, salines and occasionally narcotics will be required ; astringents should not be used until the inflammatory symptoms are subdued. These acute symptoms soon subside, but the excessive discharge continues, and at this point the use of astringent injections must be commenced. For this purpose, various astringent injections are employed, and by these means aided by tonics, mild aperients, rest and sponging the genitals, this affection is often cured. In obstinate cases, Dr. A. recommends an examination with the speculum. As an injection, the nitrate of silver, as recommended by Dr. Jervis, is preferred. Turpentine and cantharides he has given, and many times "with curative effect."

Dr. Ashwell has an article on inflammation of the cervix uteri, a chapter on disorders attendant on the decline of the menses, and an excellent chapter on hysteria; but our limits are already too far extended to admit of further notice. We must therefore refer the reader to the work itself, which we would strongly commend to the favor of the profession.

C. B. C.

Art. IX.—*Manual of Orthopedic Surgery, being a Dissertation which obtained the Boylston Prize for* 1844, *on the following question:* "*In what cases and to what extent is the Division of Muscles, Tendons, or other parts proper for the relief of Deformity, or Lameness?*" By Henry Jacob Bigelow, M.D. Boston, 8vo. pp. 211, with plates, pp. 208. 1844.

A Work on the subject of this Prize Essay has, for a long time, been a desideratum; and we are happy to find, from a careful examination of its pages, that it has been at length very satisfactorily supplied. It may perhaps be objected, that its materials are entirely drawn from foreign sources—chiefly the writings of Guerin, Bonnet, Velpeau and Little—while American Surgeons, Mott, Mutter, Detmold, Post, Watson, Dix, and others, who have written upon the subjects which pass under review, are neither quoted, nor alluded to, so far as we have observed, in any part of the Essay. The names of Barton, Gibson, and J. K. Rodgers are mentioned, it is true, in connection with *anchylosis*, but no account is given of their operations, and this whole subject is despatched in one short page. Surely the writings of Detmold and Mutter on club-foot, which have been quoted with approbation by the first surgeons of Europe, deserve honorable mention, equally with those of Velpeau and Guerin.

Strabismus.—The subject of strabismus occupies forty-five out of the two hundred pages, and is arranged under the following heads:—*Anatomical Considerations, Movements of the Eye, Functions of Muscles, Causes of Strabismus, Muscular Paralysis, Double Strabismus, Anatomical Peculiarities, Age, Operations, Appreciation of Different Methods, Exuberant Granulations, Subsequent Treatment of the Eye, do. of the Deformity, Bad Results of the Operation, Cicatrization of Parts, Dimness of Vision, Myopy, Diplopy, Kopiopy, Nystagmus, Statistics.*

Our limits do not allow any detail with respect to the contents of this work. It will be found an exceedingly useful manual both to the student, as well as practitioner of medicine. The subjects of *Stammering, Tenotomy, Club-Foot, Torticollis, False Anchylosis of the Knee-joint, Ricketty Knees, Permanent Flexion of the Hip-joint, Anchylosis, Lateral Curvature of the Spine, Contraction of the Hand and Fingers, Congenital Dislocations, &c., &c.,* are all treated of in a lucid and able manner, and altogether, we esteem it not undeserving of the mark of favor bestowed on it by the Boylston Committee.

Art. X.—*Principles and Illustrations of Pathological Anatomy: being a complete Series of Colored Lithographic Drawings.* By J. Hope, M.D., F.R.S., &c. First American Edition. Edited by L. M. Lawson, M.D., Prof. of General and Pathological Anatomy and Physiology in Transylvania University. Cincinnati: 1844, 4to., pp. 359.

Principles and Illustrations of Morbid Anatomy; adapted to the Elements of M. Andral, and to the Cyclopædia of Practical Medicine, being a complete Series of Colored Lithographic Drawings, from originals by the Author, with Descriptions and Summary Allusions to Cases, Symptoms, Treatment, &c., designed to constitute a complete Appendix to works on the Practice of Physic, and to facilitate the Study of Morbid Anatomy in connection with Symptoms. By J. Hope, M.D., &c., Edited by L. M. Lawson, M.D. Cincinnati: 1844.

The appearance of this splendid work of Dr. Hope's, with all its beautifully colored engravings, from a city beyond the mountains, whose site but a few years since was an unbroken forest, furnishes a striking illustration of the progress of civilisation and science in our land. It is scarcely possible for us to keep pace with the periodical publications of the day, and entirely out of the question to notice them as they deserve; we must therefore be contented with their announcement, subjecting a few of the more valuable to analysis, or an enumeration of their contents. A good work on Pathological Anatomy, which could be afforded at a reasonable price, and with suitable illustrations, was a desideratum; for although we were in possession of the works of Andral, Horner, and Gross, yet they were deficient in plates and drawings, which are indispensable to a correct appreciation of morbid appearances.

This work of Dr. Hope treats of morbid changes in the brain, lungs, heart, liver, alimentary canal, kidneys, and uterus; of cancer, fungus hæmatodes, tumors of various kinds, &c., &c., the descriptions of all of which are accompanied by colored delineations, which convey to the mind images so distinct as to be retained with fidelity, until they can be impressed by comparison with nature. Once recognized as types of what has been seen, by occasional re-inspection they stamp the image in faithful and indelible colors. Dr. Hope has truly remarked that "the difficulties which beset the study of morbid anatomy are great. Prejudice circumscribes the sphere of the private practitioner, while the brief time in general spared by the student for hospital attendance, and the full occupation of that time by more immediately necessary studies, prevent him from making much progress during the period of his education. Should he attempt to improve his opportunities by reading, he finds that elaborate descriptions of morbid appearances present but indistinct images to his mind; these images, if not speedily embodied by a reference to nature, are evanescent; and when compared with nature, they often place him in perplexing doubt respecting their identity."

The plates are well executed, and the additions of the American editor are highly judicious and valuable.

ART. XI.—*A Summary of the Transactions of the College of Physicians of Philadelphia, from November and December,* 1844, *to March,* 1845.

THE contents of this pamphlet are varied and interesting. The first paper by Dr. Parish, being the "Annual Report on Surgery," gives a very lucid account of the gun-shot wounds that occurred during the riots, with practical remarks, &c. It appears that the total number of persons killed was 17; of whom the larger number died on the ground, or before medical aid could reach them; of those who survived the first shock of their injuries, or were not mortally injured, fourteen were conveyed to the Pennsylvania Hospital, and received the prompt aid of the Surgeons of that institution. Of these, the following is a brief description:

"It has been reserved for this fair city, once pre-eminent for the prevalence of good order, to furnish the most memorable example of a riotous outbreak which occurs in our country's annals; an outbreak attended with bloodshed, and the loss of human life.

"Aside from the contemplation of this dark page in our history, which, as republicans and Christians, we, in common with our fellow citizens generally, must sincerely deplore, it becomes our profession calmly to look back upon the scene of desolation through which we have passed, and to view it in its relations to the cause of science, and to questions affecting human life. Such a review, although it may elicit nothing new or extraordinary, cannot be without interest; and we shall therefore proceed to notice such cases, growing out of the riots, as we have been able to collect, without, of course, attempting a full account of the whole affair.

"1. The ball (apparently from a pistol) entered the left groin, and was found after death, loose in the cavity of the pelvis, having traversed the viscera without any apparent wound. Died of Peritonitis.

"2. The ball (rifle) entered the top of the left shoulder, penetrated the supra spinatus and infra spinatus muscles, the spine of the scapula, and came out below its inferior edge. After he left the Hospital, a considerable number of spiculæ of bone were discharged.

"3. The thumb was carried away by a ball. The first phalanx was fractured and afterwards removed.

"4. The ball (of a large size) entered the right groin, and passed out of the ischiatic foramen of the opposite side. He never fairly reacted.

"5. The ball (musket) entered the chest, one and a half inches inside and above the left nipple. It was extracted two inches to the left of the spine, and one inch above the inferior extremity of the scapula. Complete reaction took place two hours after his admission into the Hospital. No post-mortem examination was made.

"6. The ball (of a large size) entered three inches to the left of the umbilicus, and passed out at the same distance to the right. There was a protrusion of several feet of the small intestines. The wound was dilated and the intestines returned. He died of Peritonitis.

"7. This was a mere flesh wound, most probably from a musket ball.

"8. This also was a mere flesh wound.

"9. This was a flesh wound from a large ball. The cure was retarded by the inflammation extending down the fascia of the forearm.

"10. The slug entered the left groin, severing the femoral vessels, and passing out of the ischiatic foramen. He never reacted.

"11. The slug entered the left side of the chest, fracturing the second rib, close by the sternum, penetrated the upper portion of the lung, and lodged in the cavity of the chest.

"12. The bone was shattered by a canister or grape shot. The arm was amputated at the joint.

"13. The slug entered the front of the arm, passed through the axilla, inside of the vessels (they being thrown out by the raised position of the arm), and was extracted outside of the external edge of the scapula. He died from absorption of pus, his lungs being covered with metastatic abscesses.

"14. The ball (musket) passed through the right thigh without fracturing the bone, entered the left, and made a comminuted fracture of the os femoris. The ball was completely flattened against the bone, being afterwards extracted. He is now doing well, and has every prospect of having a good serviceable limb."

"It will be seen, by the foregoing table, that of the fourteen cases reported, seven died. The larger number were admitted on the evening of the 7th of July, during the battle between the mob and the soldiery, which occurred in Southwark; and from the contiguity of the Hospital to the scene of action, but little time elapsed before they were placed under surgical treatment. In several of the cases seen by your reporter, where the wounds were mortal, the patients were tormented with that intense and insatiable thirst which occurs in some forms of low fever, and in very prostrate conditions of the system, and which is noticed as amongst the most horrible torments on the field of battle; together with vomiting, and extreme jactitation and restlessness. In two of the cases, death occurred without reaction, while in several others, the patients lingered in a hopeless condition for several days. It was also remarked that the wounds by slugs were more severe and dangerous than those by balls—the slug being irregular in shape, and producing more extensive lacerations of the parts with which it comes in contact.

"Of the particular cases mentioned in the table, we would briefly refer to several, as presenting points of unusual interest. First—the case of Joseph Cox was remarkable from the fact, that a ball should have traversed the lower portion of the abdomen, without inflicting injury upon any of the viscera; and that the patient should have lived fifteen days with a ball lying in the cavity of the pelvis. It would seem probable, had the ball found an exit from the right side, without injuring any of the vessels, that this patient would have recovered, notwithstanding its passage through the abdomen.

"Both of the cases in which the cavity of the chest was penetrated, terminated fatally. In the case of Saunders (No. 5), the ball was extracted, after having passed through the left lung, judging from the direction which it took, although no post-mortem examination was permitted; this patient died on the second day after admission.

"In the other case, the wound was made by a slug, which was not removed, and the patient died on the fifth day after admission. It may be remarked that gunshot wounds of the thorax, in which the ball passes through one of the lungs and comes out on the opposite side, or even where it lodges in the cavity, are by no means *invariably* fatal. Many cases are on record of recovery after such accidents; and Dr. Godon, an intelligent surgeon recently attached to the United States Navy, informs me that several such recoveries fell under his personal observation while on a recent visit to Vera Cruz, and that the surgeons of that country state such results to be by no means uncommon. It is attributed by the South American surgeons to the remarkable salubrity of the atmosphere which prevails in that climate, and to the good constitution of those who meet with these accidents.

"It will be seen that but one case occurred requiring amputation, and that this was successful."

"We are indebted to Dr. Norris for some brief details of the following case:

"Among the wounded at the Kensington riots, the case of A. R. P. deserves notice, from the successful issue which followed speedy amputation. This individual received a slug wound on the evening of May 7th, while on the ground at Kensington. He was struck about the middle of the arm, the slug passing through the limb, with extensive laceration of the small parts, and producing a frightful comminuted fracture of the humerus; the bone being splintered so far up, as to make it necessary to amputate very near to the shoulder.

"The patient, who lived in the lower part of the city, did not reach home until late at night, and about midnight Dr. Norris saw him. He found him suffering extreme pain; much exhausted from loss of blood and from abstinence, as he had not eaten anything since morning. Amputation was immediately performed. No unpleasant symptoms followed, and Dr. N. ceased his attendance in about three weeks.

"A case which fell under the joint care of Dr. Remington and your reporter is especially worthy of record, from the fact of the perfect restoration of a limb after a pistol shot, which penetrated the thigh, and fractured the femur, just above the condyles.

"M. H., a stout muscular man, aged about 25 years, while marching in the ranks of a military company to the scene of the riots in Kensington, on the afternoon of the 8th of May, was shot by the accidental discharge of a six-barrelled revolving pistol, which dropped from the belt of an officer of the company, who was marching about twenty feet in the rear of him.

"The ball, passing between the men who were marching behind the patient, struck him upon the inside of the leg, while in the act of raising the limb to make a step. It entered just opposite the head of the tibia, a little below the knee joint, and passing obliquely upwards and outwards, it struck the os femoris about an inch and a half above its articulating surfaces, producing an irregular fracture, with lateral deformity and slight shortening of the limb; without, however, an entire separation of the bone, throughout the whole breadth. A ragged edge of bone could be felt under the skin on the outer edge of the thigh—and the patient suffered extreme pain from the least motion; no appearance of the ball could be detected.

"The treatment consisted in the application of Desault's splint, as in ordinary fracture of the femur. Tr. opii gtt. xx. were directed every four hours, or oftener if the pain was severe; and a lotion of lead water and laudanum was freely applied to the limb with wetted compresses. On the 9th, the limb was much tumefied and painful, although the patient had intervals of comfortable sleep, and was free from fever. One hundred American leeches were directed to the limb, and the lotion to be continued. On the 10th, the swelling had subsided, and the pain was less severe; he was directed a saline cathartic, and continuance of the other treatment. From this period no unusual symptom occurred, different from an ordinary case of fractured thigh.

"The parts traversed by the ball healed up without suppuration, and, at the end of two months, the patient was allowed to give slight motion to the limb. He recovered with a very slight limp, and experiences no other inconvenience at present, except that the limb is at times painful from changes in the weather. The ball has not yet been discovered. The favorable issue of this case is probably attributable, in a great measure, to the small size and smooth surface of the bullet, which is not larger than the largest sized buckshot; to the velocity with which it entered, and to the unusual thickness of the bone at this point. The patient, also, was young, of a remarkably fine constitution, and of temperate habits.

"The following case, furnished by Dr. Ashmead, has some points of resemblance to that just mentioned, while the result was equally gratifying.

"T. S., aged about 45 years, was wounded at the Southwark riot on the 7th of July. He was struck by a bullet on the outer and inferior edge of the patella, fracturing its lower half into four or five fragments, the upper half remaining entire. The ball wound around the head of the tibia, and came out at the edge of the popliteal space behind; then entered the internal surface of the left leg, passed through the gastrocnemii muscles, and emerged externally, without injury to the bones. The cavity of the right knee joint was, of course, opened. The patient immediately fell, although he experienced no pain; there was considerable hemorrhage from the wounds.

"Dr. Ashmead saw him in about five hours; he immediately dressed the wounds with lint, smeared with simple cerate, and over this a poultice, avoiding most carefully, throughout the treatment, the access of air to the cavity of the knee joint. The fractured limb was placed on a straight splint, and kept at perfect rest; and anodynes were ordered at short intervals. On the following day, the right limb was much tumefied, although without severe pain. The patient had twitchings in his sleep, tympanitis, loss of appetite, and general restlessness; and for ten days, the danger of tetanus appeared to be imminent. During this period, opium was freely administered, with stimuli and nutriment—and the patient escaped. After this he improved rapidly, and at the end of four weeks was able to sit up, and was allowed to give slight motion to the joint.

"When last seen, November 1st, he was allowed to have as free use of the limb as is usual after ordinary fracture of the patella—a firm ligamentous union having taken place between the fragments. The circuitous course of the ball, passing round the head of the tibia, and traversing a route of four or five inches without entering the joint, was remarkable—as was the recovery of the use of the limb to its present condition, without serious inflammation and stiffening of the joint."

We omit the remainder of this interesting paper. We next have an account of a "Case of Remittent Fever," by Dr. Condie; "a case of Luxation of the Femur into the foramen ovale," by Dr. Ashmead; "the Annual report on Meteorology and Epidemics," by Dr. Moore; "an obituary notice of Dr. John C. Otto," by Dr. Parish; "Annual Report of Diseases of Children," by Dr. Condie; from which we extract the following remarks on vaccination and Small Pox;

"The extent and duration of the *preservative influence of vaccination*, and the propriety and advantages of re-vaccination, continue still a subject of dispute among the physicians of the Continent.

"M. Bousquet, of Paris, is of opinion, that the efficiency of the vaccine virus becomes diminished by its transmission through a number of individuals; and, in support of this opinion, appeals to the fact, that the effects produced by the renovated virus introduced in 1836, were much severer than those which followed the insertion of the old matter. It is, however, a curious fact that the difference between the vesicle resulting from the new and that from the old virus, is not perceptible until the sixth or seventh day, by which time the preservative power of vaccination has been exerted—which is proved by the circumstance that a second vaccination after this period, does not produce any effect. Nevertheless, from the increased frequency of variolous and varioloid affections of late years, and from the fact that the greater number of those attacked with small pox subsequent to vaccination are adults, M. Bousquet is led to believe that a diminution in the activity of the vaccine virus does result from its repeated transmission through a number of individuals, and that the full preservative power of vaccination does not extend beyond a certain term of years, although its modifying powers continue throughout life. He advocates, therefore, the plan of re-vaccination. M. Gauthier de Claubry, on the other hand, maintains that there does not exist any ratio between the severity of the local effects of vaccination and its preservative power. He considers the severer symptoms which have followed the insertion of matter direct from the cow, merely as phenomena attendant upon the naturalization of cow pox in the human subject. When this has been once accomplished, the transmission of the virus through hundreds of individuals in no degree impairs its virtues, or modifies the character of the eruption to which it gives rise. In proof of this, he refers to the fact that, in some places, the same virus has been employed for twenty-five, thirty, or even forty years, and yet the character of the vesicle produced by it has continued unchanged during the whole period. No argument, M. de Claubry maintains, can be drawn from the occurrence of secondary small pox, since this takes place in persons who have had variola in the natural way—which he states to occur in one of every sixty-three of those who have been spontaneously variolated. M. de Claubry asserts, also, that varioloid eruptions were as frequent in the early days of vaccination as they are now, though their variolous character was not then apprehended; and he denies that such eruptions are confined to adults. He, finally, endeavors to weaken the positive evidence in favor of re-vaccination, by showing that varicella, varioloid eruptions, and even variola, have occurred in the Prussian army, among persons who had been vaccinated.

"In a recent communication from Dr. Gregory, Physician to the Small Pox Hospital of London, ten cases are noticed of death in children, from small pox occurring after vaccination. The ages of these ten children are as follows:—1 of 9 years; 1 of 8; 2 of 6; 1 of 5; 3 of 4; 1 of 3; and 1 of 6 months.

"In all these cases, it is stated by Dr. Gregory that the evidence of prior vaccination was such as to justify the Registrar in recording them as cases of fatal small pox after vaccination. The children were vaccinated in different localities, showing that the source of the vaccine imperfection was not local; while the respectability of the vaccinators, and the appearance of scars in eight of them, forbid the assumption of entire irregularity in the vaccine process.

"Now if ten deaths of children, from variola occurring after vaccination, are recorded in one year, is it not fair to presume that a much larger number of cases of varioloid eruption, which terminated favorably, occurred in children during the same period?

"Dr. Lossette, of Milan, has recently published a series of tables, one of which is given, to prove that the preservative powers of vaccination are temporary, and limited to a certain number of years. The table includes 1411 cases of small pox after vaccination, observed during the years 1837 and 1838. Of these 1411 cases,

130, or	9.21	per cent.,	occurred in	patients	under 5	years	of age.
101, or	7.15	"	"	"	from 5 to 10	"	"
151, or	10.7	"	"	"	" 10 to 15	"	"
20 , or	14.31	"	"	"	" 15 to 20	"	"
282, or	14.9	"	"	"	" 20 to 25	"	"
216, or	15.3	"	"	"	" 25 to 30	"	"
160, or	11.33	"	"	"	" 30 to 35	"	"
63, or	4.8	"	"	"	" 35 to 40	"	"

"This table is defective, inasmuch as no statement is made of the ages at which the patients were vaccinated.

"M. Lossette has likewise endeavored to ascertain, by actual observation, whether there existed any relation between the appearance of the vaccine cicatrix and its preservative power. With that view, having examined 420 individuals affected with small pox subsequent to vaccination, he classed the cicatrices they presented, according to their physical characters, into, 1st, normal; 2d, imperfect; and, 3d, very imperfect. Of the 420 patients, 231, or 55 per cent., had normal cicatrices; 124, or 29.5 per cent., incomplete; and only 65, or 15.47 per cent., very imperfect. From this, it appears that the most regular cicatrices offer no certain guarantee against an attack of variola.

"The next inquiry was to ascertain whether a normal cicatrix renders the consecutive small pox less violent in its character; which resulted in the negative, as will appear by the following table:

Cicatrix,	normal,	83	cases	confluent,	91	discrete,	57	very	discrete.
"	imperfect,	53	"	"	49	"	22	"	"
"	very imp't,	18	"	"	28	"	19	"	"

"The next inquiry was to ascertain whether the number of vaccine pustules afforded any assurance of protection. The result is shown by the following table:

1 cicatrix,	30	cases	confluent,	30	discrete,	16	very	discrete.
2 cicatrices,	36	"	"	35	"	22	"	"
3 "	40	"	"	38	"	20	"	"
4 and more cicatrices,	48	"	"	65	"	40	"	"

"Dr. Kahlert, of Prague, has performed the experiment of passing the vaccine virus taken from the human subject, through the cow, with a view to augment its activity. The retro-vaccine virus thus obtained, produced, when inserted in the arms of children, well marked vaccine vesicles, unattended by any peculiarly severe constitutional symptoms."

ART. XII.—*A Familiar Explanation of the Nature, Advantages and Importance of Assurance upon Lives, and the various purposes to which they may be applied, etc.* By LEWIS POCOCK, F. S. A. London: 1844.
Prospectus of the Mutual Benefit Life Insurance Company. New York: 1845.

AMONG the various applications of science to the necessities of mankind, there is none, perhaps, which has made more important and substantial progress than that which forms the subject of the works at the head of this article. When first attempted, life insurance was effected without any data whatever whereon to found a calculation—without even a guide in the form of an estimate of the probable certainty of the duration of life at a given period. An effort was made in London, more than a century ago, to provide, at death, for the families of such as placed in common stock a small annual sum, without estimating the prospect that any had of living a longer or shorter time; and thus the vigorous man, in the possession of full health, was placed on an equality with the hoary-headed sire, and the same payment from each would secure the stipulated amount at the time of decease. It was evident, however, that the one whose prospect of living was comparatively long, was taxed for the benefit of the other, whose "life was, as it were, a span long;" and an attempt was made to cause a more equitable rate of premium to be assessed among the applicants, founded upon the probable duration of life at different ages. This calculation became the foundation of insurance, and has been continually corrected and improved until it has arrived at its present state of accuracy, enabling the contractors for insurance to divide a designated amount of profits during life, besides paying the amount agreed upon at the period of death.

We have not unfrequently heard the question asked, when reading the results of some toilsome votary of science pursuing his investigations in the statistics of life, What is the object of all this? Why waste the time and energies of life upon matters which are of so little practical utility? The almost perfect state of the science of Life Insurance will give the answer to these queries; for it is to the continued labors of scientific men, that a gradual improvement in the construction of tables of mortality has been made. The improvement has been slow—just in proportion to the difficulties of the task. The abstract nature of the doctrine of probabilities, the rate of mortality, the comparative duration of life and of an equitable premium to be paid upon an assurance of it, at every different age, and under every variety of circumstances, would very naturally deter many from undertaking the task; none but such as had acquired a taste for such pursuits by professional occupation or by their previous study, would attempt its elucidation. But from these causes, there are, perhaps, scarcely any subjects which have been treated with such an uniform degree of talent; all the works that have been written having some part of the science more carefully enlarged, or more perspicuously explained, than it had been by preceding authors.

The duration of life in individuals is indeed a matter of uncertainty; yet nothing is more certain than its average duration in the aggregate. Life insurance is founded upon the simple fact that every individual has a certain average term of existence at each period of life, which term has been ascertained by close observation and careful calculation, abundantly borne out by experience. Like the chance of destruction of property by fire or on the seas, the duration of life, in single instances, is of very great uncertainty; but when the calculation is made upon a wide and general view of the occurrence, it is found, like other events which are considered purely accidental and fortuitous, to have certain relations, and to be governed by certain laws. Thus, the number of births, marriages and deaths, the relative proportion of the sexes, have a uniformity with the number of houses destroyed by fire, or of any other casualties under similar circumstances, and which are found to be nearly equal during equal periods of time. The average duration of human life at all ages is formed from observations among larger masses of mankind during an extended period of time; such observations constituting the materials, or data, necessary for constructing what are technically termed tables of mortality.

The work of Mr. Pocock contains an account of the mode of transacting business of about eighty different Life Insurance Companies, all founded upon the same unerring principles, but many differing in their mode of carrying out the details, principally in the method of dividing the profits. Some pay them to the stockholders, others divide them in different modes, either by actual cash payments or by applying them to the credit of the individuals insured, and thus reduce the amount to be paid upon the premiums until ultimately no more payment is required—as agreed upon by the parties to the contract.

From the Prospectus of the Mutual Benefit Life Insurance Company of New York, it appears that a careful digest of these different modes of effecting the same object has been made, and that course adopted which is most decidedly for the benefit of those insured; a principal feature of which is that but a small part of the premium is required in cash; thus giving all possible advantage to persons taking out policies; while all thus united have a *joint* and mutual interest both in its profits and its management. Founded on scientific principles, exemplified by experience, its real services to all classes of persons, who are dependent on salaries or professional labor, have proved essentially beneficial to the families of such in the event of death, and this species of mutual insurance ranks among the noblest works of benevolence in the world.

To our professional brethren we cannot too strongly recommend Life Insurance as the best method of providing for a family in the event of the death of its head. Whilst a man enjoys health, he looks forward, often indeed, with too great confidence, to being able with ordinary success in business, to provide something for his family at the distant period at which he calculates on being taken from them; but he is unexpectedly seized with sickness, and although he may recover, yet the probability that he may be brought by it prematurely to his grave, fills his mind with anguish on seeing the helpless and unprovided condition in which his family will be left. Indeed, whether we consider the condition of a man who desires to leave a little property behind him—to arise out of his yearly savings; or who, having saved some money, and no longer has the means of increasing his savings, is anxious to make as much as he can of it, to provide for comforts in his declining years by annuity; or who can spare something from his annual income to purchase an endowment for a child: where can he find so advantageous a means of accomplishing either of those objects, as in a well conducted establishment for Life Insurance.

ART. XIII.—*Mental Maladies. A Treatise on Insanity.* By E. ESQUIROL, &c. Translated from the French, with Additions. By E. K. HUNT, M.D. Philadelphia: 1845. 8vo., pp. 496.

WE congratulate the profession, on having placed within their reach, the great work of Esquirol on Insanity—the result of forty years' study and observation. No man ever watched, with greater care, the symptoms of insanity, or more successfully studied the manners, habits, and wants of the insane, than Esquirol. Living among them all his days, he consecrated his life to their service, and to the cause of enlightened humanity.

The work is composed of materials collected at the Salpêtrière, at the Hospital at Charenton, and in his private practice, and which have been previously published in the Dictionary of the Medical Sciences, and other medical works.

The work is destined to occupy the front rank among similar treatises on Mental Diseases. The version is faithful and elegant, and the accomplished translator has made some judicious and useful additions; altogether, we know no publication of the kind more worthy of general adoption and circulation than this. We hope to be able, hereafter, to give a more particular account of its contents.

ART. XIV.—*Remarks on certain topics connected with the general subject of Slavery.* By S. HENRY DICKSON, M.D. Charleston, S. C. 1845. 8vo., pp. 35.

WE have received from the estimable author, a copy of a pamphlet with the above title, which we have carefully examined. Although many of the writer's positions are undoubtedly sound, there are others, which, with our present views, we should be unable to subscribe to, and which, we believe, may be shown to be untenable.

That all mankind may have descended from a single pair, we hold to be demonstrable by known laws and facts in physiology. Prichard has conclusively shown that tribes of domesticated animals, that have been carried into countries where a different climate prevailed from that to which they were accustomed, undergo great variations partly from the agency of climate and partly from the change of external circumstances, connected with the state of domesticity. That these variations extend to considerable modifications in external properties, color, the nature of the integument and of its covering, whether hair or wool; the structure of limbs and the proportional size of parts; that they likewise involve certain physiological changes or variations as to the laws of the animal economy; and, lastly, certain psychological alterations or changes in the instincts, habits, and powers of perception and intellect. He has shown that these last changes, in some cases, are brought about by training, and that the progeny acquires an aptitude to certain habits which the parents have been taught; that psychical characters, such as new instincts, have been developed in breeds by cultivation, and also that these varieties are somctimes permanently fixed in the breed so long as it remains unmixed. He has likewise proved, that all such variations are possible only to a limited extent, and always with the preservation of a particular type, which is that of the species; that each species has a definite or definable character, comprising certain undeviating phenomena of external structure, and likewise constant or unchangeable characteristics in the laws of its animal economy and its psychological nature; and that it is only within these limits that deviations are produced by external circumstances.

Now it is obvious, as Prichard remarks,* that races of men are subjected, more than almost any race of animals, to the varied agencies of climate, and that civilisation produces even greater changes in their condition than does domestication in the inferior tribes. And if this be so, we may expect to find fully as great diversities in the races of men, as in any of the domesticated tribes. "The influence of the mind," says this writer, "must be more extensive and powerful in its operations upon human beings than upon brutes. And this difference transcends all analogy or comparison. *A priori*, we might expect to discover in the psychological characters of human races changes, similar in kind, but infinitely greater in degree." Without expressly denying the unity of the human race, the remarks of Dr. Dickson evidently show that he does not believe in it, and the writings of Dr. Prichard are spoken of as "of the nature of special pleading." "He is an advocate," says Dr. D., "anxious, not to discover truth, but to maintain an opinion." With all due deference, we are compelled to believe such a charge entirely inapplicable to Dr. P. His works are as fine an example of inductive reasoning as we have ever read: indeed, they are made up of facts, the inferences thence deduced, in the form of distinct propositions, of which we have given an example above, constituting but a few paragraphs. Mr. P. has, it is true, some cutting remarks in reference to the opinions of those who reject the testimony of the Scripture, that it pleased the Almighty Creator to make of one blood all the nations of the earth, and that all mankind are the offspring of common parents. We know that the opinion is very prevalent, or has been in this country, that the negro is inferior in his original endowment to the human family which supplied Europe and Asia with inhabitants; that he is organically different, and cannot be raised to an equality, in moral and intellectual powers, with the offspring of that race which displays in the highest degree all the attributes of humanity—a man may hold to such views, and still deny that the ultimate lot of the ruder tribes is a state of perpetual servitude. But how any one can believe, as is seriously maintained by a southern physician, that the mulatto is a *hybrid*, exceeds our powers of understanding. We had supposed that *hybrids*, whether animal or vegetable, were incapable of re-production! If we are not mistaken, Professor Wagner has shown in his Physiology, that nature has established the sterility of hybrid animals by a really organic impediment. Facts and analogical reasoning conclusively prove, that distinct races of men must either be incapable of intermixing their stock, or if not, that they belong to the same species.

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* Researches into the Natural History of Man.

ART. XV.—*On the Anatomy and Diseases of the Urinary and Sexual Organs, containing the anatomy of the Bladder and of the urethra and the treatment of the obstructions to which these passages are liable.* By G. J. GUTHRIE, F.R.S. Phil., 1845.

THIS is one of the best monographs we have ever seen on the diseases of the urinary and sexual organs. It treats fully of the "*Stricture of the Bladder and Urethra; on the formation of the spasmodic and prominent stricture; the symptoms and means of cure of stricture; the treatment of impassible stricture; on suppression and retention of urine, and on irritation of the membranous and prostatic parts of the urethra.*" The well known character of the author as a practitioner and lecturer on surgical diseases, is too well known to render any commendation of the work necessary at our hands.

ART. XVI.—*A Practical Inquiry into the value of Medicinal Naptha in Tubercular Phthisis.* By G. O. HOCKEN, M.D., London. 1844. 8vo., pp. 72.

THAT patients occasionally recover from tubercular disease of the lungs, we have no doubt whatever, for this is abundantly established by pathological anatomy—that they are ever cured by *drugs*, we are yet to be convinced, notwithstanding the boasts of empirics, and the pretended power of such specifics as Mr. Hocken brings forward. If this disease ever becomes directly amenable to the resources of our art, we believe it will be the result of a more accurate acquaintance with the laws of healthy and diseased nutrition, the causes which modify it, and the conditions necessary for its healthy maintenance; we must acquire a more perfect knowledge of the laws of assimilation, of the processes by which normal structure is built up, and the changes in the vital fluid from malnutrition, which result, unless checked by counter influences. Then we may not only hope to prevent the formation of tubercular matter, but even to effect its removal, when deposited in the different tissues. When we find for example the globules of the blood always diminished in the very commencement of pulmonary tuberculization, being far below their physiological average, and this too before auscultation and percussion disclose any signs of hidden mischief, we are furnished with a most valuable fact in relation to the conditions under which tubercular deposits take place, and a very significant hint as to the choice and application of modes of treatment. Without supposing that a decrease of the globules is a cause of the formation of tubercles, for there are other elements which enter into the causation of this morbid product, which we have not time to consider here; we mention this merely to illustrate the advantages which we may expect to flow from the cultivation of pathological chemistry, and to indicate the path in which we are to travel to arrive at the curability of this as well as many other diseases. As for ourselves, we place no confidence (in the treatment of this disease) in *cod-liver oil; naptha; chlorine or iodine inhalations; mercury; hydrocyanic-acid; creosote; iodide of iron and potassa; digitalis; sal ammoniæ; common salt; chloride of lime; tar-vapor; the production of emphysema by forced respiration; cupping, bleeding and leeching; blisters, setons and tartar emetic plasters; daily emetics; sarsaparilla; hydropathy; homœopathy; puncturing the chest;* or any of the other thousand experiments and specifics that have been brought forward from time to time, to be talked about, and written about—a seven days' marvel—then to be laid aside and forgotten. True science does not point, as it seems to us, in this direction. The human body, with its complicated structure and wonderful functions, is not a piece of machinery, whose movements, when irregular or deranged, are to be regulated by inhaling an unnatural vapor, or swallowing a positive poison, no matter how its operation is to be explained, whether *dynamically*, or by the "*similia similibus*," or "*contraria contrariis*" *principle.* We regret that we cannot acquiesce in his conclusions, for they are at variance with well known facts in pathology. If there is any one principle established by the investigations of modern pathologists, it is the difficulty, if not absolute impossibility of demonstrating the presence of tubercles in their early and forming stage; and yet Mr. Hocken ventures to pronounce with absolute certainty on their existence, and that too after the most superficial examination.

His cases present a most surprising uniformity different from anything we have ever met with in this disease, and, we had almost said, different from anything that ever occurred in nature; any one at all acquainted with practical auscultation knows that the expiration may be prolonged, and the voice more resonant at the right than at the left side, and there be no disease present; and yet Mr. H. sets this down as positive proof of the existence of tubercles. There is no satisfactory evidence to us, that any of Mr. H.'s patients had tubercles in the lungs; some of them probably had bronchitis; and counter irritation, and other remedies, were employed besides the naptha—most of the cases moreover occurred late in winter, and of course were likely to improve as the weather grew warmer. We need not add that we have no confidence whatever in naptha, any more than in the farrago of medicines already enumerated.

Art. XVII.—*Elementary Instruction in Chemical Analysis.* By C. R. Fresenius, Chemical Assistant in the Laboratory of the University of Giessen: with a Preface by Professor Liebig. Edited by J. L. Bullock. New York: D. Appleton, 1844. 12mo. pp. 285.

This work, prepared by Liebig's assistant, and under his particular direction, is one of the best manuals for the use of students and pharmaceutical chemists that has hitherto been published. Many new and simplified methods of analysis are given which commend the work especially to all who are anxious of obtaining instruction in inorganic analysis. The work has already gone through several editions in Germany, and deserves equal popularity in our own country. No physician at the present day can practise his profession successfully and understandingly, who does not pay more or less attention to the details of chemical analysis, and he can have no better guide than this manual of Dr. Fresenius.

Art. XVIII.—*The Philosophy of the Moving Powers of the Blood.* By G. Calvert Holland, M.D., Physician Extraordinary to the Sheffield Infirmary, &c., &c. London: 1844. 8vo. pp. 308.

This very philosophical disquisition on the moving powers of the circulation, which has been kindly forwarded to us by the ingenious author, displays a most intimate knowledge of all that has been written on the subject, and evinces a mind peculiarly adapted for investigation of a physiological kind. The essay is not designed as a complete treatise on the circulation, but rather as a criticism upon the different views and theories which have been advanced by the later writers on this topic. Every enlightened physiologist, we think, must agree with the author in opinion, that the capillary circulation possesses a force independent of the heart's action; but those who wish to see the whole matter discussed in an extensive and truly philosophical manner, must consult the work itself.

Art. XIX.—*Outlines of the Institutes of Medicine, founded on the Philosophy of the Human Economy in Health and Disease.* In three parts. By Joseph A. Gallup, M.D., &c. 2d Edit. Revised. 2 vols. New York: 1845. 8vo.

Our notice of the new edition of this work must necessarily be short. The following extract from the introduction, from the pen of Dr. Francis, will show in what estimation the work is held by the writer.

> "Not only does the work of Dr. Gallup abound in valuable aphorisms and facts for immediate guidance, but also in suggestions of moment, which, by attention and thought, may be matured into useful practices.
>
> "Alike clear of an affectation of the reconditeness of mere antiquity, and of the fashions of the European schools, the author shows himself to be an eclectic who reasons on, and explains the wisdom of his choice. Amidst many positive merits, we care not to point out occasional omissions of matter, as well as defects of style, which, after all, interpose little difficulty in the way of our understanding the author's meaning and reach of argument. The work is for sale by Collins & Brothers, Pearl Street."

PART THIRD.

1.

Foreign Medical Intelligence.

ANATOMY AND PHYSIOLOGY.

1. *On the Maturation and Extrusion of Ova.* By Prof. **Bischoff**, of Giessen.—It is well known that the function of menstruation in the human female was long ago and frequently compared with "the heat" in animals. Some of the most intelligent physicians and naturalists of various periods have adopted this opinion, although it was contended against by others no less celebrated than themselves. Regarding Burdach as the most important of the latter class, the only argument of all those brought forward by him which seems to me to have any weight is that in which he draws attention to the important distinction existing between "the heat" and menstruation, in respect to sexual impulse and copulation. The beast copulates *only* during "the heat;" man, on the contrary, always feels himself repelled from the female during menstruation. If this were correct, I should also be of the opinion that it involved an essential distinction. But attentive observers have previously remarked, and I can only confirm it, that such a distinction is altogether wanting, for the female of animals also manifests, at the commencement of "the heat," a condition of sickliness, during which it altogether refuses to permit coitus to be effected. It seeks that act for the first time only when the phenomena attendant upon "the heat" have reached a certain stage of development. It is, however, also well known that a sensation of unusual good health comes on, and the sexual impulse especially manifests itself in the human female, on the passing off of menstruation, and it seems to me, therefore, that the most complete accordance occurs here, and that all the arguments which have been brought forward in favor of the analogy between "the heat" and menstruation are rather strengthened than otherwise. A repetition of the arguments here would be superfluous.

All intelligent anatomists, physiologists, and physicians, have long since been convinced that the cause of menstruation, as well as that of the sexual impulse, and of the whole female character, is to be sought for in the ovaries. But that the uterus on the other hand,—although it be the organ in which the characteristics of classes and species are most especially manifested, in so far as regards the genital organs,—yet, in the above respect, has but a secondary importance. Numerous pathological facts of the most diverse description, and primary deviations from the natural formation, exhibit most constant accordance with this view. I shall quote only one such instance here; it is from a recent and almost unknown source of information upon castrated females, communicated by Dr. Roberts, in a work descriptive of a journey from Delhi to Bombay. The persons examined by him were twenty-five years of age, large, muscular, and perfectly healthy. They had no breasts, no nipples, and no hair on the pubes. The vagina was completely closed, and the arch of the pubis so narrow that the ascending ramus of the ischium, and the descending ramus of the pubes, were almost in contact. There was no deposition of fat about the neighborhood of the genital organs, nor were the nates more developed than in man, whilst the rest of the body was well provided with fat. There was not a trace of menstrual secretion, nor anything which might supply its place; there was also no sexual impulse.

Anatomy has also recently furnished direct proofs in favor of the views advanced in this essay. Surprising as it seemed at first, from the endless controversies carried on respecting the corpora lutea, there is now no longer any doubt of the fact that, at each return of the function of menstruation, the ovary takes on a condition of increased activity, that a Graafian vesicle becomes considerably developed, and bursts, and that a corpus luteum is formed in its place. The researches of R. Lee, Paterson, William Jones, Negrier, Gendrin, Raciborsky, and Pouchet, leave no room for doubt on this point. It would occupy too much space to repeat their observations here: I will only mention, that I have myself had the opportunity of making four observations which bear upon this part of our subject, all occurring in young and healthy persons, three of whom met their deaths by drowning, and the fourth died very suddenly. I found indubitable appearances of menstruation in all of them; on the ovaries of three of them a Graafian vesicle which had burst and was filled with blood, and on the fourth an enormously swollen one which had a diameter of seven lines. I learnt afterwards quite decidedly with respect to one of these instances, that menstruation was going on at the time when she met her death.

I have just received intelligence from Dr. Ecker, of Heidelberg, that he had found a Graafian vesicle which had burst, and was filled with a recent coagulum, in the body of a person aged 25, who had lately been executed there, and in whom menstruation had been present twelve days before death. He examined the tube with great care in search of an ovum, but in vain, probably because it had by that time undergone dissolution. Besides, in my opinion, the human ovum may be classed amongst the most difficult of all tubal ova to discover, in consequence of the slight density of its yolk, and the vaguely defined outlines of its zona.

It is therefore not to be wondered at, that numerous earlier observers—Valisneri, Santorini, Roederer, Haighton, Home, Brugnoni, Cruikshank, Meckel, Blundell, and others—have seen corpora lutea upon the ovaries of those who had never been pregnant, and even in those of virgins and young girls. Such instances were always regarded as exceptions to the rule, as pathological, or as results of sexual excitement occurring at some former period without coitus, whilst they no doubt were produced by recent menstruation, or the opening of a follicle and escape of an ovum.

Lastly, it is a well-known fact, that women conceive the most readily immediately after menstruating, and even examples are not wanting where this took place only during menstruation.

It is likewise now a settled point that there is no more certain mode of reckoning the period of pregnancy, than that which dates from the last occurrence of menstruation. I have been informed by Professor Nägel that he had never once been deceived when reckoning nine months and eight days from the last menstrual period in regular instances. At the same time he told me, that he had frequently removed sterility by advising coitus immediately after, or even during menstruation.

Although at the present moment direct information as to the fate of the ovum during and after the menstrual period may be wanting (for supplying which I hope that an early opportunity, combined with the necessary dexterity and care, may be presented), yet no doubt can be entertained, that:

"In the human female, during the period in which she is capable of child-bearing, there occur every four weeks a maturation and extrusion of an ovum from the ovary, which process is accompanied by a simultaneous secretion of blood from the uterus."

I have no doubt that this law will not only stand the test of future experience, but will also serve to explain many phenomena hitherto unintelligible.* Experience will teach us what are the limits of its application in man. It appears that the secretion of blood from the uterus commences whilst the ovum is still inclosed by its Graafian vesicle, and that the latter bursts and the ovum escapes towards the termination of that function. While in the tube, the ovum is probably for some days capable of fecundation on copulation being effected. What is the limit to this capacity? Direct observations alone can answer this question, and they are as yet altogether wanting. I believe, however, that I have a right to assume that fecundation must take place while the ovum is in the fallopian tube, since it is extremely probable that development first commences there. If, from all the information we at present possess, the conclusion may be permitted, that the ovum of the rabbit remains three days, that of the ruminant from four to five, and that of the dog from eight to ten days in the oviduct, we might then assume the ovum of the human female to be capable of fecundation during a period of from eight to twelve days after its extrusion from the ovary; thus probably, also, from eight to twelve days after the cessation of menstruation. Such a conclusion, however, being based upon analogy, is hazardous, for we know that very great varieties exist in different animals with respect to the time during which the ovum remains in the oviduct; for example, in the deer, according to my own observations and those of Dr. Zeigler, it most probably requires even months for its passage through the tube. All the attempts to define the period which have hitherto been promulgated,—where ova 12, 14, and 21 days old are reported to have been seen in the uterus, and in which even the embryo was already far advanced in its development,—are altogether unworthy of confidence, since they date from the act of coitus, which only specifies the limit of impregnation, but not the period at which the ova quit the ovary, nor do they admit of any conclusion as to the latter being drawn from them. The lengthened period during which the human ovum is capable of fecundation may possibly have been the cause why observation has as yet proved nothing precise upon this point. On the other hand, it does not appear that any ordinary circumstances, such as physical and moral excitement of the sexual impulse, and the like, could easily induce a change in the character of the maturation of ova, and thus also in the possibility of impregnation. The fact is contradicted by all our experience with regard to menstruation, which proves, indeed, that that function can be, and actually is, sometimes accelerated or retarded; but still only by the operation of causes which exert a far deeper influence than those alluded to. Of course, all that is known with respect to menstruation has its value in relation to this point, since it indicates the period of maturation of an ovum; but the collected evidence with regard to that function shows an alteration, such as that mentioned above, to be something uncommon; and all our latest information on the formation of corpora lutea proves only that the above-named influences can hardly possess such a power.

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* Dr. Panck, of Dorpat, lately brought forward a case, in which he considered he had discovered a remarkable organic connection between the fallopian tube and ovary soon after conception, by means of which the passage of the ovum from the ovary into the tube is effected and secured. For my part I am convinced, and for the following reasons, that this was a case of commencing menstruation, but not one of conception; firstly, coitus was by no means proved to have taken place; secondly, Professor Bidder did not find any spermatozoa in the genital organs; and lastly, because, although the conjectural act of coition should have been effected five days previously, yet the

It is doubtless unnecessary to draw attention to the extraordinary importance attached to the discovery of a law which relates to one of the weightiest interests of mankind. Science and society in general are in the highest degree interested in it. On this account I most warmly desire that numerous further tests of its truth may not be wanting, and that it may not be opposed by antiquated deeply-rooted prejudices, which are sometimes regarded as experience. But whoever proceeds to the test should previously qualify himself for the task by much embryological research, for he has to do with things which are not easily ascertained. The errors of centuries, not indifferent about the question, prove this. I hope to be able to meet well-grounded doubts, and will at once proceed to remove one such, which has already been frequently opposed to me. I have often been asked, "If conception be dependent on menstruation, and this again on the maturation of an ovum, how does it occur that women have frequently conceived

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Graafian vesicle was still closed. I consider the connection between the ovary and fallopian tube, which was observed in this instance, as decidedly pathological. Delicate false membranes, of precisely the character described, are very common in connection with the female organs of generation.

who had never menstruated?" My reply is the simple statement, that although the secretion of blood be a normal, and the most striking phenomenon which accompanies the maturation of an ovum, yet it is by no means indissolubly connected with it. This is proved by the first glance at the animal kingdom, where this periodical maturation of the ova often occurs with, but more frequently without such a secretion. In the human female it is altogether a normal and important phenomenon, but by no means one which is essential,—it is only accidental. It may be absent, but mature ova may nevertheless be developed, and therefore also become impregnated. This will readily harmonize with what experience shows, that in general such women are also altogether free from any abnormal symptoms.

Again, many will no doubt question the law laid down, on the ground that it is scarcely conceivable that so important a circumstance should have escaped observation altogether, and especially that of anatomists and physicians, during their numerous disputes respecting the corpora lutea. To this I would reply, that it is quite true many striking points were long since known; as, for example, the dependence of fruitfulness in the female upon menstruation, the admission of the fact that conception takes place more readily immediately after menstruation, the reckoning of pregnancy according to the last appearance of that function, and the like. The reason why these observations did not lead to the full knowledge of the matter lies no doubt in the frequent recurrence of the menstrual period, or the maturation of an ovum, and possibility of a conception. If women menstruated only once or twice in a year, it would long since have been remarked that such was the only time when conception was possible; menstruation would long ago have been recognized as perfectly analogous to "the heat" in animals, even though the most essential element of it, namely, the maturation of ova, had not been discovered. The possibility of conception, however, is, on the one hand, so frequently repeated, in consequence of the menstrual period occurring every four weeks, that, in the absence of farther data, it was not easily possible to fix the point of time with which it was connected more accurately; and, on the other hand, menstruation passes over so frequently without its purpose, conception, being attained, that the attention must naturally have been directed more to that function than to the dependence of conception upon it. With regard to animals, it was the precisely opposite relation of circumstances which proved the impediment to the correct perception of the analogy between "the heat" and menstruation. In them the period of heat either occurs so seldom, once or twice a year, or, when repeated more frequently, as in the cow, the sheep, the pig, &c., it is so interfered with by ordinary circumstances, such as our economical arrangements and the like, that the animals are either immediately impregnated, or that the recurrence of the maturation of ova is obstructed and stopped by the secretion of milk. That an analogy, otherwise so striking, with one of our commonest domestic animals, the cow, should have remained for the most part unnoticed, is no doubt to be attributed to some of the above circumstances.

As regards the researches of anatomists and physiologists, we may remark, that they in the first place did actually make some correct observations; such, for instance, as those proving the formation of corpora lutea without coitus and conception. The fact that they did not interpret them correctly, nor develope them further, is an additional proof of the necessity for not only the corporeal eye and hand, but in the intellectual eye also for our observations, and shows how necessarily our researches must be accompanied by an idea, by reflection, if they are to apprehend correctly even simple relations of things. But these ideas were not mature, they could not be so; and the eyes of men, otherwise most distinguished, could not therefore be enlightened by them. Lastly, however, the rare opportunity for making observations on this subject must certainly be allowed great weight. Such opportunities occur but very seldom after the usual mode of death, the result of disease. Menstruation, the maturation and extrusion of ova, is too intimately connected with the functions of health, not to be interrupted by almost all modes of death, and therefore it is that, on examination afterwards, nothing is found. It is only in the bodies of perfectly healthy persons who have met a violent death, that we can hope to obtain the required circumstances for observation. And how many of such as die suddenly will meet with their deaths exactly at the period of menstruation? and again, how many of those who do, will fall into the hands of such as are competent to so minute an investigation? The most favorable opportunities for the purpose would be afforded in the cases of executed criminals, where the requisite facts with regard to dates and so on may be precisely fixed.—*London Medical Gazette.*

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2. *Professor Berutti on the Spontaneous Generation and Nature of the Spermatic Animalcules.*—The reproduction of certain animal and vegetable species is effected, without the intervention of any ovum, after the manner of what is called gemmiparous and fissiparous generation. Now there is a great analogy between the development of *gemmæ* and that of *ova*. In the former, however, all the elements that are necessary to the production of a living being, are found contained; whereas, the latter have need of the new elements of the prolific fluid before they can become duly evolved.

Every particle of a living being—which, on being detached from its parent body, is capable of reproducing an independent living creature, does not materially differ from a bud, either in its mode of origin, or in its property of producing new individuals. Thus organic molecules, in certain circumstances, have the power of attracting to themselves new materials from surrounding bodies, which they then incorporate with themselves, and so elaborate as to form a new being. Spontaneous generation, in the opinion of Professor Berutti, consists in the exercise of this property, and differs from oviparous, gemmiparous, and fissiparous generation, in that it takes place among molecules, which, in consequence of the death of the parent, have ceased to constitute a part of a living individual.

Microscopic observations have clearly shown that the globules, resulting from the dissolution of organic matter, possess an inherent activity; sometimes they approach to and unite with each other, and at other times they seem to be mutually repellant. It is not at all inconsistent with rational belief to suppose that this is the cause of spontaneous generation—an act, it may be observed, to which the concurrence of the atmospheric air and of water is probably always necessary.

The reproduction of parts of an organic body that have been excised or destroyed is effected by means of globules floating in a fluid which subsequently evaporates, leaving the globules dry; hence the cellular production and origin of new tissues. The same process of assimilation is likewise that by means of which the fœtus is formed in the maternal ovum, as Wolf and Rolando have shown.

The necessary condition, therefore, of every sort of generation, reproduction, and even of the nutrition of organized parts is invariably the presence of certain organic globules endowed with a plastic activity, and floating in a fluid exposed to the contact of the atmospheric air—which, in place of furnishing carbonic acid as it does to plants, supplies ammonia for the spontaneous generation of animals. The fluid in its turn supplies hydrogen and oxygen.

The organic productions of spontaneous generation are the most simple of all, because they spring from organic globules that are not expressly prepared for this purpose.

Professor Berutti is of opinion that not only infusory, but also entozoary, animalcules are developed by spontaneous generation. He considers it too as highly probable that the *acarus scabiei* is the product, rather than the cause, of the itch. Lastly, he seeks to show that the Zoosperms are not genuine animalcules, but rather organic molecules formed in the minute extremities of the spermacetic tubes by the effect of an exuberant nutrition. The action of the Zoosperms seems to be very analogous to that of the Pollen in the fecundation of plants; and their movements may fairly be compared to those of this vegetable matter.—*Annali Univ. di Medicina, Inglio,* 1844, and *Revue Medicale, Nov.,* 1844.

MEDICAL PATHOLOGY AND PRACTICAL MEDICINE.

3. *On the Contagious Effects of Puerperal Fever on the male subject; or on persons not Child-bearing. Read before the Sheffield Medical Society, March 5th,* 1845. By ROBERT STORRS, Esq., Doncaster.—As I have understood that the papers submitted to the consideration of this Society are expected to be rather the result of personal observation and experience, than compilations or extracts from authorities already before the medical public, I shall endeavor to abstain, as much as possible, from a reiteration of doctrines or opinions already settled in the minds of most of my hearers, and shall confine myself to circumstances which have been less frequently observed, or if they have been observed, have seldom been descanted on. As the subject involves the question of contagion and infection, before I proceed further, it may be desirable, perhaps, that I should state my views of it, especially as far as it relates to febrile, puerperal diseases.

There are three distinct classes of infectious diseases affecting the human subject, which differ in the degree and extent of their infectious power; and these are again capable of being subdivided into more minute species, some of which must necessarily run into each other, though the extremes of them are sufficiently distinct. These three classes embrace the most diffuse and incomprehensible poison of scarlatina, and the tangible permanent virus of inoculated diseases, and of those diseases capable of being produced by contact alone.

The first of these classes comprehends the exanthemata and plagues, and is purely epidemical; the second comprehends erysipelas, typhus, and other diseases of a more local character, being partly epidemical and partly endemical; and the third descends as low as diseases which are produced by inoculation or by actual contact only.

The first of these classes, epidemical diseases, has an extended signification; that is, it is generally prevalent amongst many at a time, and is also infectious in its nature. Most of the exanthemata are of this class, as small pox, scarlatina, measles, &c., which not only infect those who are in actual contact with their several poisons, but also infect the house or the neighborhood, and, in many instances, promulgate the disease, by the mere instrumentality of the atmosphere, to very considerable distances.

The infectious nature of these poisons, however, differs very considerably in degree; the poison of some of them being of a much more tangible and substantial kind than that of others, and capable of producing a disease of a similar nature in a sound subject, by the artificial introduction of its virus into the system; so far corresponding with diseases of a purely contagious nature. Epidemical diseases differ also in being either permanent poisons, to which human nature is, and perhaps, must be for ever, subject, pervading the whole world at the same time, being equally prevalent in warm and cold climates, in the eastern as in the western hemisphere, and may be looked upon as constant agents, by means of which the Almighty is pleased to keep in check the rapidly increasing tide of population; or they may be devastating and ravaging plagues sweeping the globe from east to west, or from country to country, until all those who are susceptible of their effects have been seized by them, or until their powers becoming weakened by diffusion, have gradually, perhaps rapidly, ceased. The causes of these plagues may be either terrestrial commotions or planetary influences. Hecker chiefly ascribes them to the former source, and relates many dreadful earthquakes, volcanic eruptions, inundations, vast destructions of animal, especially insect life, as preparations for the great plague which devastated Europe in the fourteenth century, and which for a time almost destroyed the bonds of social life.

In our own time we have had an instance of a plague of this description visiting us from the east, but happily the storm has passed over, and has left but few traces of its existence as a disease; and though the seed was sown in the western world it took no deep root, and after a rapid and too plentiful harvest, has again retired within its former, and it is to be hoped, more legitimate bounds.

I need not point out the remarkable difference between plagues of this description, in their rise, progress, and decline, and our own naturalized, and (in an extended sense) local fevers, as is seen in typhus, which in all its forms and varieties more or less pervades certain localities, and prevails at certain seasons of the year from one generation to another, in almost all European countries; and that they differ, but perhaps less remarkably, from the pestilences which linger constantly about the shores of the Levant, and amongst many eastern countries.

The next class of infectious diseases, of which erysipelas and typhus are illustrations, has a less diffuse power than that which belongs to the exanthemata and to pestilential fevers; has sometimes a local origin, and is thence propagated by personal or by atmospheric means; or is produced in situations favorable to its propagation by some subject brought there who forms its nucleus.

Actual contact seems to be far less the means of producing this class of diseases than the atmosphere of a close room, or the breath, and the miasma from the foul discharge of the patient. Where, however, a depraved state of the blood, such as is often produced in aggravated cases of typhoid diseases, or a gangrenous sore is present, actual contact is, I believe, capable of transmitting a subtle poison, which will affect the susceptible by even intermediate contact, as is shown in those cases of puerperal fever related in the reports of the Dublin Lying-in Hospital, and in many other instances, both in public and private practice. With this class of diseases, the season of the year and atmospheric changes have much to do, and are seen to exercise a much more direct influence on their rise and progress than is the case in the former class of diseases arising from the more diffusible poisons.

The local origin of these diseases no one can, I think, doubt, who has had an opportunity of observing how frequently they will recur to one particular neighborhood again and again, and how entirely they are removed when a better system of drainage or ventilation has been instituted, or when a long standing nuisance has been removed. The Sanitary Report of the Poor-Law Commissioners has, I think, thrown considerable light on this subject, and will also tend materially to the abatement of the local causes which produce diseases of this class. Would it were possible it could remove the poverty, improvidence, and attendant miseries from which they too often arise.

The last class of genuine contagious diseases, such as require the actual and enduring application of their several poisons for their production, I shall not dwell upon, but come immediately to the subject of my paper, puerperal fever, and its consequences—a disease, which, though less infectious through an atmospheric medium, is much more transmissible by actual, or by intermediate contact, than ordinary typhoid diseases, and may, therefore, be considered as forming the connecting link between contagion and infection.

This definition of the procreative powers of puerperal fever I consider to be a very important one, because, unless it be known to the practitioner, he may direct all his attention to the prevention of the supposed diffuse power of the poison, when he ought to limit his view of it to its more direct and contagious one. For instance, he may use all the means in his power to prevent it from spreading from case to case, and may overlook its origin from some specific and perhaps permanent cause. This was indeed my own case. For some weeks during the prevalence of the disease in my practice, I supposed it to spread from case to case, and directed all my precautions to its prevention on this supposition, until it was fairly proved to arise from a gangrenous erysipelatous disease, from which alone the cases were all severally produced by my intervention. The case was exactly the same under Mr. Reedal, Dr. Paley, and many others.

The diseases which are capable of producing puerperal fever, by means of actual or immediate contact with the subjects of them (intermediate contact being almost the invariable means), I consider to be typhoid, and more especially gangrenous, erysipelas; the purulent matter of abscesses resulting from either of them, or even from typhoid scarlatina; the fomites of *post-mortem* cases of peritoneal inflammation, accompanied with depravity of the fluids; the gangrenous sore of typhus fever; the close approximation of malignant cases of typhus; in fact the actual, or intermediate application to the parturient female of any of those discharges which arise from a depraved and poisonous condition of the blood; and lastly, and but rarely, the disease arises from inward constitutional causes, of which a depraved state of the blood, and of the secretions of the patient, is one of the conditions.

True puerperal fever once set up by any of the means above stated, is again capable of imparting to any person not in the puerperal state, by actual contact or close approximation, the following diseases:—

1st. Inflammation of the peritoneum or other serous membranes, accompanied by low fever, both in the male and female subject.

2d. Erysipelas; local, as in the hand or arm, from *post-mortem* inspections; or general, as in the face or person.

3d. Typhus fever, with its various accompaniments, and in a variety of forms.

Having already, in another paper, endeavored to show what are the causes of puerperal fever, I shall now confine myself to an attempt to prove the three positions above stated, viz: the diseases to which it gives rise. In this endeavor, I shall take the liberty of reciting the following cases which have occurred in my own practice, and support them by quotations from cases which have occurred in the practice of others; and as the proof of the first of these positions is the subject to which I chiefly intend to direct the attention of my audience, I trust they will not think me tedious if I relate, somewhat in detail, certain cases where puerperal fever has produced similar symptoms to its own, in the person of the husband, and more frequently still in the persons of the relatives, of females who have died of it. The cases also go far to prove that the event of the approach of death adds virulence to the poison, as the cases recorded have all happened where the death has been the result.

Dr. S. next proceeds to prove each of the above propositions, by the citation of facts and cases, occurring within his own observation, but which we pass over, for want of space. The conclusions, however, appear to us legitimate and well sustained by the evidénce. The writer concludes with the following remarks:

"Mr. Nunneley, of Leeds, I believe, considers the diseases of puerperal fever and erysipelas to be identical; and so far as they seem to arise from the same animal poison, I think a review of the cases above related will corroborate his opinion. But whether we can consider diseases so dissimilar as they appear to be, as differing from each other only from the texture of the body affected by them, I leave others to judge; for though the poison may be the same, the varieties of the disease produced by the condition of the party affected by it, by the constitution of the patient, by the strength and severity of the poison, and by many other circumstances, may be almost as great as in all those diseases, which arise from such a source as checked perspiration, derangement of the stomach, or from any other single cause, which may produce either cholera, inflammation, or diseases of a directly opposite nature, according to the predisposition of the party affected.

"The certain knowledge, however, of the capability of one or the other of these diseases affecting the persons of the nurses or attendants, may lead to many beneficial prophylactic means; for not only may puerperal fever be prevented, by a knowledge of its origin, from erysipelas, or from typhus, but typhus and erysipelas may also be in some measure prevented from arising in the persons of those who are in attendance on fatal puerperal cases, by the various precautions which a knowledge of the danger would inculcate."—*Provincial Medical and Surgical Journal, May 7th*, 1845.

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4. *On the treatment of Gout.*—In consequence of the abundance of *uric* (lithic) acid in the blood, Mr. Ure contends that *urate of soda* will necessarily be formed; which he has also established by various experiments. It is also a well known fact that there is in gout a torpid condition of the liver, on the removal of which the gouty symptoms are relieved. For this purpose Mr. Ure recommends the *sulphate of manganese*, in doses of one drachm, dissolved in half a pint of water, and swallowed before breakfast. In the course of an hour or two this is found to occasion copious liquid stools. With the view of testing whether bile is discharged to any amount by this medicine, Mr. Ure digested a portion of loose feculent matter with strong alcohol, in order to separate the mucus; this was thrown upon a filter, by which a limpid olive-colored solution was obtained, which after evaporation by a water-bath to the consistence of honey, yielded with the addition of boiling muriatic acid, a notable quantity of biliary resin, together with a little fatty matter; thus affording unequivocal proof of the excretion of bile; as a *cholagogue*, therefore, in gout, &c.,

this article is well worthy of trial; its action being prompt and soon over. It is also stated by Mr. Ure and others that it does not produce any of those distressing and lowering effects which are so apt to follow the exhibition of mercury and antimony in certain constitutions. (See "*Braithwaite's Retrospect*," Part x., p. 95.)

As a local application in chronic gout, for the purpose of abating the erethism of the vessels, promoting the absorption of effused fluids, and arresting the recurrence of attacks, which eventually lead to distortion and anchylosis, the topical employment of *acetic æther* and rectified *coal naptha* has recently proved highly successful. The former was first introduced to the notice of the profession by M. Sedillat, in the translation of the Medical Society of Paris (No. x., Mess. An. 5), but never seems to have attracted much attention in England or this country till lately. Mr. Ure states (*London Medical Gazette*, Nov. 8, 1844, p. 190) that *acetic æther* generally determines a speedy sedative agency in the more acute stage of gout when applied with gentle friction over the whole of the affected surface, to the amount of half an ounce every twelve hours, provided after each friction the patient is kept warm in bed. In the sub-acute form of the disease much benefit will be derived from simply pencilling over the part affected with a camel-hair brush dipped in naphtha. We have known the *tincture of arnica* applied with advantage in some cases, but in a patient now under treatment it produced an extensive vesicular eruption, attended with œdema of the whole limb. An ointment composed of ʒi. of *extract belladonna*, mixed with ℥i. of lard or simple cerate, will often afford relief in painful cases, applied to the part. Poultices are objectionable from their effects to relax the capillaries.—*Ed. N. Y. Jour.*

PATHOLOGICAL, THERAPEUTICAL, AND OPERATIVE SURGERY.

5. *Case of Obstruction of the Large Intestine, in which the ascending colon was opened with success, the patient dying three months afterwards of another disease.* By Samuel Evans, Esq., of Derby. [*Communicated by* William Bowman, F.R.S., Assistant-Surgeon to King's College Hospital].—Lewis Street, æt. 23, a farmer, has been liable for several years to attacks of diarrhœa. In September, 1843, he was seized with violent pains in the bowels, resembling colic, which lasted thirteen hours. About the third week in January the attack recurred, and became more severe on the 5th of February: the author saw him for the first time on the 7th. He was suffering from severe intermittent pains in the abdomen, which was distended, but free from tenderness. There was a distinct swelling in the right iliac region. His bowels had not been relieved since the 5th. Opiates, active aperients, and stimulating injections, were administered during five days without relieving the pain and sickness, or procuring evacuations. On the 12th and 13th, his sufferings were relieved by large doses of the Liquor Opii Sedativus. From this time to the beginning of April the size of the belly gradually increased; he also daily suffered many paroxysms of pain; at intervals large quantities of flatus, and small portions of clay-colored fæces, escaped from the bowels. The patient's health became much impaired, and vomiting recurred almost daily. On the 25th of March, Callisen's operation, as modified by Amussat, for the formation of an artificial anus in the loin, was proposed, but the patient yielded to the wishes of his friends in postponing it. His emaciation increased, and the abdomen became extended to the greatest possible degree; the evacuations entirely ceased, and the pulse became feeble and fluttering.

April 9th.—The operation was performed. A transverse incision, four inches long, was made in the right loin; the ascending colon was opened, and more than two gallons of semifluid clay-colored fœces were discharged. He recovered from the operation, and by May 9th had gained flesh; the wound in the intestine had healed, but the evacuations escaped entirely by the artificial anus, being restrained by a plug in the orifice, which is removed four or five times a day. At the end of June he commenced passing diabetic urine, and to suffer from thirst.

He rode a distance of six miles in an uneasy cart, and shortly afterwards symptoms of peritonitis supervened, and he died on the 5th. On examination of the body, the cause of obstruction was found to be a stricture in the colon, just beyond the angle formed by the junction of the ascending and transverse portions of the gut. The contracted part was almost as hard as cartilage, and would only just admit a crow-quill; its inner surface was ulcerated. The cæcum was enormously distended, and nearly as large as a stomach of ordinary size; the ascending colon was also much enlarged.

The author remarks that this is the eleventh case on record in which Callisen's operation, modified by Amussat, has been performed in the adult in consequence of obstruction in the intestinal canal. From the previous history of the case, it would appear that the disease had been of slow progress, and of considerable duration; but at the period to which the operation was delayed, owing to the interference of the patient's friends, he was in so alarming a condition that it is impossible to imagine a case more unfavorable for the operation. Two months afterwards he was so much recovered that there appeared to be every prospect of his restoration to health; but these hopes were disappointed by his imprudence in regard to diet and exercise; but as far as the operation is concerned, the case was successful.

Sir George Lefevre remarked on the indiscretion of the patient in going about so soon after the operation, and thought this should have been prevented by the medical attendant. Local and general treatment, together with the recumbent position, and strict attention to diet, were essential to the satisfactory conclusion of such a case. He briefly referred to two cases, of which he had drawn up a description and published. In one of these cases a lady of distinction in St. Petersburgh had had the colon punctured merely for the purpose of relieving the pain caused by distension. In this case the suffering was extreme; there was incessant vomiting and most urgent distension. A trochar was plunged into the colon, an escape of gas took place, and relief ensued. She died, however, in eighteen hours afterwards. In another case of internal obstruction the patient survived the operation twenty hours. Would an operation of this description be considered justifiable in this country, merely with a view of relieving symptoms, the termination of the case being certainly, either way, fatal?

Mr. Benjamin Phillips regarded the paper as a very important one. The operation had been performed many times, with various success, both for obstructed bowels and imperforate anus. As far as he knew it had been generally unsuccessful. The operation itself was by no means a difficult one, the real difficulty in these cases being to determine the circumstances which justify the proceeding. On what did the obstruction depend? Cases of obstruction presented themselves, dependent on the collection of hardened fæces, in which the patient became emaciated, and the symptoms presented all the appearances of internal strangulation, yet these cases were relieved without operation. If the obstruction were the result of disease in the rectum, as for instance carcinoma—of which disease Broussais was said to have died—there would be little difficulty in detecting its nature, and an operation like that under consideration might be performed with the chance of prolonging life, but even here we only substitute one infirmity for another, and it might be questionable which was the most difficult to be borne with. It was when the obstruction was situated higher up that it was difficult to decide on what it was dependent, and in what way we should proceed. The contraction, in fact, might exist at the very point at which the operation was usually performed. In Mr. Evans's case there was no indication presented to warrant us in drawing a conclusion as to the precise cause of the obstruction. Indeed, from the occasional passage of clay-colored fæces, it might have been diagnosticated as arising from fæcal accumulation, instead of being, as it was afterwards found, a stricture of the colon.

Dr. Powell remarked that it was surprising how long constipation might exist in hysterical patients. He related the case of a lady who was constipated for three weeks, and who was relieved by the use of opium and croton oil. On one occasion she had no evacuation for two months. Injections were of no avail, and she took as much as half a grain of morphia and two drops of croton oil night and morning. In this case he believed the obstruction to be dependent merely on hysteria.

Mr. Davis related the case of a man who had been invalided from the West Indies, and whose bowels were moved only once in three weeks. His health was good; but he was occasionally subject to spasmodic pain in the abdomen. Extract of colocynth with opium was given without effect, and he then took a gamboge pill three times a day, with small doses of Epsom salts. This usually succeeded in procuring an evacuation containing a great number of scybalæ every three weeks. The only unpleasant symptom under which he labored was occasional attacks of spasmodic colic. Under this treatment his appetite improved, though he would now and then reject his food. He detailed another case of constipation following parturition, in which an evacuation, when it was obtained, was found to contain a great number of scybalæ. He mentioned these cases as illustrative of the effects of proper treatment in prolonged constipation.

Mr. Solly agreed with Mr. Phillips as to the difficulty of determining the cause of obstruction in cases of prolonged constipation. Every surgeon in practice must have experienced this difficulty. He recollected a case which occurred some time since of a woman who was tapped for what was supposed to be ascites, but which was found after death to be simple distension of the colon with fæces, the result of scirrhus of the rectum. He particularly referred to those cases of internal obstruction which resulted from the passage of adhesive bands from one portion of intestine to another. Some years since he had seen a case of this description with Dr. Sutton of Greenwich. He (Mr. Solly) had been called on to pass a rectum bougie in a case of obstinate constipation. This was readily done, no impediment to its passage being encountered. The patient died four days afterwards. A band of adventitious membrane was found extending from the colon to the mesentery, completely binding down the former, and obstructing its canal.

Dr. James Johnson considered that in Mr. Evans's case there was little difficulty in deciding at what point the obstruction existed. The fact of the bougie having readily passed, combined with the ready injection of three pints of fluid, and the position of the distension, indicated that the obstruction was near the caput coli. The operation he considered to have been perfectly justifiable. It was astonishing how long fæcal accumulations might exist without seriously affecting the general health. He had a patient at present under his care who had not passed any fæces by the rectum for the last three months. He was suffering from a large inelastic tumor near the caput coli, and daily vomited up fæcal matter. His appetite was good, his general health unaffected, and there did not appear to be any signs of a fatal termination. It might be a question how far an operation in this case might be advisable.

Mr. Dunn related the case of a child who was born with imperforate bowel, the obstruction being situated so high up that a bougie could not reach it. No operation was performed, and after death the colon was found to be not larger than a crow-quill.

Mr. Blizard Curling observed, that it was by no means an easy matter to reach the colon by operation, particularly in infants, and when that canal was undistended. He related a case in which this was attempted; the surgeon, however, cut down upon the kidney. In a case of imperforate anus, in which attempts to reach the rectum were fruitless, he advised the operation of Amussat; but it was not acceded to. After death, however, he (Mr. Curling) performed the operation, and found it less easy than some gentlemen would appear to think it. By cutting a little too near the spine he came upon the kidney, an accident which he believed had occurred on more than one occasion when the operation had been performed on the living body. When the colon was distended, and the incision was made a little more externally, there would be no difficulty in reaching the intestine. He agreed with Dr. Johnson that in Mr. Evans's case the cause of the obstruction was sufficiently evident to justify the operation. This case, indeed, offered a sufficient encouragement to other surgeons to resort to this proceeding, particularly in those cases in which the obstruction was as evident as in this instance.

Dr. Taylor remarked, that as Mr. Evans was clear in his opinion as to the seat of the obstruction in this case, the operation was justifiable, and had undoubtedly prolonged the life of the patient. There was nothing in the paper to show the nature of the obstruction—whether it was carcinomatous or otherwise. The microscope probably would be the only means of deciding this. It would appear, however, from the history of the case, that it had originated in simple inflammation. It appeared that the patient had for some years been subject to diarrhœa; this was probably the result of inflammation, which had afterwards proceeded to ulceration, cicatrization, and contraction. He had seen similar cases of contraction from ulceration the result of fever, though not always situated in the same spot. In most of these cases no operation had been contemplated, and the patients had died from chronic peritonitis before the obstruction had continued sufficiently long to warrant any operative procedure. He thought that one mode of distinguishing whether the obstruction depended simply on the accumulation of hardened fæces or on structural disease, would be to determine whether the patient had previously suffered from inflammation of the bowels. If so the obstruction was probably structural. He had seen these obstructions in the small intestines frequently follow fever. They were the result of ulceration, cicatrization, and subsequent contraction.

Mr. Hilton considered that in Mr. Evans's case the treatment with respect to the operation had been most judicious. The position of the obstruction was obvious, and the operation was therefore justifiable He referred to cases of obstruction in the intestines resulting from a twisting of the colon upon itself, and of which he had lately seen an instance. The operation of Amussat was proposed, but not performed. After death a vertical incision was made in the line of the abdominal muscles from the false ribs to near the crista ilii: there was no difficulty in reaching the colon by this proceeding. The cases mentioned by Sir George Lefevre, in which the peritoneum was punctured, were very different from those under consideration, in which it was the object of the operator to avoid wounding that membrane.

Dr. Watson, from all he had seen or heard on the subject, had come to the conclusion that the question of the operation was to be decided by the special circumstances of each case. In a case like that of Mr. Evans the operation was justifiable, provided the patient had been acquainted with the nature and consequences of the proceeding previously. Other cases might occur, like that related by Dr. Johnson, in which, however inconvenient, it would be considered advisable to allow fæcal evacuations by the throat, rather than resort to the formation of an artificial anus. Other cases would occur in which it would not be possible *à priori* to decide whether an operation were advisable or not.—*Lon. Med. Gaz.*, Ap., 1845.

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6. *Surgical Society of Ireland. Observations on the Advantages Derivable from Dr. Warden's Prismatic Auriscope, and the Application of the Prism, in making Examinations of the Os Uteri and Bladder, &c.* By R. Tuthill Massy, M. D., &c. —Mr. President and Gentlemen,—Having always believed it pleasing to the members of this excellent Society to bring before their notice any improvements made in our profession, which may tend to facilitate the diagnosis of disease, and make the treatment more successful, I wish to call your attention to the advantages of a reflecting prism for sending a white light into the open cavities of the body. When last in Edinbugh, I called on Dr. Warden to see the new discovery which he made. During my visit, he examined a recruit, a lad about eighteen years of age, looking healthy. After he enlisted the surgeon would not pass him, as his hearing was very imperfect. The boy stated it arose from a cold which he got six months previous; he could not hear the tick of a watch in his left ear, but could in his right ear. Dr. Warden examined his ears with the prismatic auriscope, and considered the deafness incurable. On looking into the right ear, I saw the posterior half of the membrana tympani covered with a white substance, so hard that it could not be removed with a probe without giving pain; the other half of the membrane was gone. The left ear was filled with a fluid of the consistence and color of cream, which was easily removed with a camel's hair brush, leaving the membrane with an appearance of having been thickened by former inflammation. The second person I examined was a little boy, aged seven; he had been deaf two months. With the aid of this flint glass prism, I could see plainly the membrana tympani of each ear looking florid, as if from subacute inflammation.

The third case was a child two years old. The mother stated she noticed that the child's attention could not be aroused by bells ringing, nor by whistling, and the hearing was getting worse the last three weeks. The membrana tympani of both ears had a few small patches of vascularity. The other parts had a coating of a yellowish white fluid. Now, without this prism, the ears of those persons could not be so well examined, nor the true state of each case be so accurately known. Another great advantage it has is, that it hinders your going in your own light, which we are sometimes unavoidably obliged to do, when using the speculum without the prism. When making an examination with the new auriscope, you place a light at the side of the head, on a level with the external meatus and posterior to it, and a reflector behind the light. I use a lamp with a large convex glass in front of the light; the canula is introduced through the external meatus; one side of the prism is turned towards the light, then the light having been refracted, passes from the prism through the canula to the part to be observed. This prism can be used to illuminate the os uteri, and even a stone in the bladder may be viewed through a strait catheter, having a diameter of one-third of an inch. I have examined paintings through a stomach-tube twelve inches long; and if proper reflectors were placed at the curve of a stomach-tube, to receive the image of an ulcer or other disease in the stomach, a strong light could be sent through the flint glass prism on the mirror, from which it would be reflected into the stomach, and cause the desired image to appear in the glass. For further information on the use of this prism, I refer you to Dr. Warden's observations in the January number of the *London and Edinburgh Monthly Journal.* We may now have a cystoscope and gastroscope. I had the end of this canula cut off obliquely to allow an oval view of the membrana tympani, it being oval. If any gentleman will consent, I can exhibit his membrana tympani. [Here Dr. Power kindly offered himself for examination. Dr. Massy then introduced the speculum through the external meatus, and having placed the light and prism, as already mentioned, handed them to Dr. Houston, who, immediately addressing the chairman, said he saw clearly Dr. Power's membrana tympani.]

Dr. Power begged to ask Dr. Massy whether, in examining the membrana tympani, it had appeared to him to present a convex or concave surface towards the external meatus; in other words, what its conditions in this respect were in post-mortem examinations?

Dr. Massy replied, that he had always found it slightly concave.

Mr. Scallan remarked, that with respect to the convexity or concavity of the membrana tympani as to its external aspect, in repeated examinations with a tube, it had always appeared to him to be concave, that part only against which the malleus hitches having a slightly convex appearance.

Dr. Power.—In examining the membrana tympani with a small auriscope, the radius of the circle at the point of circumference will appear convex on account of the circle being concave in the centre.—*Dub. Med. Press, April*, 1845.

OBSTETRICS AND DISEASES OF FEMALES.

7. *Malapraxis in Midwifery.—Alleged Manslaughter.—Norwich Lent Assizes.*—Raymond Gaches, aged 48, was indicted for that he, being an apothecary and man-midwife, so negligently, carelessly, rashly, and feloniously conducted himself in his attendance on one Jane Mary Lovett, in her delivery, as to inflict divers mortal wounds on her body, whereof she died on the 19th of January last, at Costessy, in this county.

Mr. Evans and Mr. Palmer appeared for the prosecution; Mr. Prendergast and Mr. O'Malley defended the prisoner.

From the evidence of Honor Mortar and other witnesses, it appeared that Mrs. Lovett had had nine children before the occasion which terminated fatally, and that on former occasions a difficulty had presented itself in the removal of the placenta, the danger from which was well known by medical men to increase with each labor. On the 19th of January the poor woman was taken ill, and the defendant called in to attend her at 11 o'clock. For some time the difficulty anticipated did not arise, but it did at length, and the nurses suggested further advice. The defendant, however, declined it, saying that "if there was a room full of doctors they could do no more than he was doing." After this he seemed to be using great exertions, with the view of relieving the patient of the placenta, and after a while a round substance came forth, such as had never been seen before by the nurses in their experience, and he was then seen to use his scissors under the clothes. At this instant the features of the sufferer underwent a sudden change and shock, on which the "doctor" observed "she was very sadly, and he would go and fetch some medicine." So saying, he placed the substance above mentioned, and some other thing which he had afterwards taken from the bed, in a vessel, which he took away with him. In the course of half an hour afterwards the patient died in great pain, and, being duly buried, nothing more would, perhaps, have been heard of the case, had not the defendant, when interrogated by the mother, stated, that the substance he had taken away was a tumor, weighing three ounces and a half, and that he had taken it to Mr. Crosse, the well-known surgeon in Norwich. This was for the time satisfactory to the inquirer, but afterwards a suspicion was excited that the defendant had not conducted himself properly towards the deceased; and her body being exhumed under the direction of the coroner, was submitted to examination by Mr. Crosse and Mr. Francis, who ascertained that the uterus and a considerable portion of the large intestines had been torn away. The evidence of these gentlemen was given to-day to the above effect, and they gave it as their opinion that great blame was attributable to the defendant if the removal of those parts was ignorantly effected by him, and still more so if it had been knowingly done; at the same time, they admitted that the case was not one of every-day occurrence, and that no stronger term than ignorance ought to be attached to his treatment of the patient; while the most skilful surgeons and operators were known to have "made mistakes."

Mr. Prendergast, on behalf of the prisoner, contended that the course pursued towards him was somewhat harsh, as it was unfair to expect from every man embarked in so critical a profession the consummate skill of an Astley Cooper or a Dr. Conquest, whose book on midwifery he largely quoted.

Mr. Justice Patteson, in summing up the case, thought that the question was not whether the defendant wilfully had removed the parts in question, for no man in his senses could do that; but it was for the jury to say whether, under all the circumstances, he had done more than fall into a mistake. *For a mere error of judgment he did not think that a medical man ought to be made criminally responsible, unless he had displayed gross professional ignorance or inattention to his patient.* The nurses all bore testimony to his kindness and attention, and it would therefore be for the jury to say whether they thought he had acted with such gross ignorance as was imputed to him by this charge.

The jury, without much hesitation, returned a verdict of *Not Guilty.*

From the verdict of the jury, given, as it is said, "without much hesitation," it would appear that Mr. Raymond Gaches in removing from a female during parturition the uterus and all the large intestines (see evidence below) did not display "gross professional ignorance or inattention to his patient," the test of criminal responsibility on such occasions, according to the learned judge. This is the third case of "disembowelling" which has occurred in midwifery practice (!) during the last year. Mr. Gaches is more fortunate than Garland and Gullimore, both of whom were committed and sentenced to imprisonment.

We are indebted to a friend for the subjoined evidence of the medical witnesses given at the inquest at Costessy. We shall return to the subject in a future number.

Post-mortem Examination of a female who died during labor.—William Bransby Francis, surgeon, of Norwich, says as follows:—I have examined the body shown to me as the body of J. M. L. On opening the cavity of the abdomen, I observed the stomach, small intestines, and bladder; and there was some blood effused into the parts about the pelvis. I took out the small intestines, which had no attachment below; the stomach was then removed, but the large intestines appeared to be absent. The bladder contained about three ounces of urine; the small intestines were then measured, and found to be fifteen feet and eight inches in length. At the lower end the intestines had been torn off. The kidneys were healthy, as well as the liver. On removing the parts from the pelvis, I found thirteen inches of the large intestines in the vagina, which was lacerated, but there was no womb. In my opinion, death was caused by the injuries inflicted in removing so large a portion of the large intestines and the womb. In the most difficult case of child-birth there ought not to be any of those parts removed. I never met with a case in which they were removed. In removing these parts I consider there was a great want of skill and judgment. I should think no practitioner at all acquainted with midwifery would remove them; the removal of them would cause almost instant death. I see no reason why after the birth of the child, if proper skill had been used, the life of the deceased might not have been saved. The length of the intestines in any ordinary case is about twenty-seven feet, or about five or six times the length of the body.

John Greene Crosse, surgeon, of the city of Norwich, says as follows:—I have also examined the body shown to me as the body of J. M. L., in company with Mr. Francis. I have heard the whole of his evidence, and confirm all that has been stated in reference to the parts found in the abdomen. The parts entirely absent were the womb with all its appendages; all the great bowel except thirteen inches from the fundament upwards; a small portion also of the small intestines, had been removed with the large, so that altogether many feet of bowel had actually been removed by the vagina. There was every appearance of the removal having been made by laceration. The removal of the womb and such a quantity of the intestine must necessarily prove fatal. There are no circumstances that would admit of or require the removal of either one or the other. Such an injury could only have been inflicted in error; no circumstance could have required or justified such a practice. I have heard all the evidences, and find that I cannot see any reason why, after the birth of the child, if the deceased had been properly treated, her life might not have been spared.

Inquest held by Mr. Pilgrim, one of the County Coroners, February 28th, 1845. —*Med. Gazette,* April 18, 1845.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

8. *Case of Poisoning by Prussic Acid.*—On Friday, the 21st of March, Mr. Hicks, of High Street, Newington, was sent for in great haste to see a person who was stated to have been suddenly taken seriously ill. On his arrival, he found the patient to be a female about 22 years of age, and of small stature; she was lying on her back perfectly insensible, the teeth clenched, foaming at the mouth, and the face so greatly congested as to be almost purple; the breathing was slow, laborious, and at long intervals; the pulse gone, and the action of the heart but feebly to be felt; the eyelids were partly closed, and the eyes appeared as if pushed forward between them, while the pupils were dilated, and quite insensible to the stimulus of light; the whole body was under such strong spasmodic action, that the head seemed buried between the shoulders, and the arms nearly turned round by the action of the pronators. There was neither emprosthotonos nor opisthotonos.

Such were the symptoms as nearly as he can recollect; and from the bloated state of the countenance, together with the foaming state of the mouth, his first impression was that the girl was laboring under some form of epilepsy;* but upon finding the patient pulseless, and the heart scarcely to be felt, he naturally looked for some other cause; when he found, upon inquiry, that the symptoms had come on directly after taking a dose of medicine, which he ascertained by tasting and smelling to contain prussic acid. This led him to the conclusion that the symptoms were produced by an over-dose of that medicine; and in conjunction with Mr. Watson, a medical gentleman whom he found at the house upon his arrival, he resorted to the means recommended in such cases—such as cold affusion to the head, applying ammonia to the nostrils, and endeavoring to give brandy and ammonia internally. As, however, the muscles of deglutition were so fully under the influence of the poison, it is doubtful whether more than a small quantity passed into the stomach, notwithstanding every means was used, by irritating the fauces, to stimulate those muscles to action. Their efforts were, however, perfectly useless, as the breathing became gradually slower; and in less than ten minutes after their arrival the patient died,—death appearing to be caused by the perfect inability of the sufferer to inspire, from the muscles of the chest, as of every other part of the body, being under strong tetanic spasms; the natural consequences being extreme congestion of the brain and lungs.

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* No odor of prussic acid was perceived about the mouth, or in the room.

On making inquiries of the father, who was present at the time the medicine was taken, it appears that no sooner was the liquid swallowed, than the girl, who had been previously sitting, started up, throwing her hands over her head, uttering at the same time a loud gasping sound, *but no scream or shriek;* she stood still for a second or two, then running forward about two yards, fell with her head first to the ground; after which she never moved, but continued to make a sort of moaning noise for five minutes. The respiration was accompanied by a sound very much resembling that observed in laryngismus stridulus. The ribs appeared to become fixed by a sudden tetanic spasm of the muscles. The time which elapsed between the taking of the liquid and death was *twenty minutes.* The deceased died ten minutes after the arrival of Mr. Hicks.

Post-mortem appearances.—At *ninety* hours after death (or nearly four days), the body was examined, when the following were the appearances presented. Externally there was great lividity, the teeth firmly clenched, and there was foam about the mouth.

Head.—The dura mater and sinuses were much congested, and the whole substance of the brain was dotted with blood, which was fluid, and exceedingly black. Ventricles empty; no odor of prussic acid in this cavity.

Thorax.—The lungs were much congested, otherwise healthy; heart small, and of feeble power; the right ventricle slightly dilated, but the valves healthy; the whole organ was filled with blood, which was perfectly fluid, and of a very dark color. The odor of prussic acid on opening this cavity was very evident, not so much from the smell as from the sense of constriction produced in the fauces.

Abdomen.—The stomach contained about two ounces of undigested food, smelling strongly of prussic acid, the organ itself appearing healthy, with the exception of a small patch near the cardiac orifice, which was red and vascular. This, Mr. Hicks, however, is inclined to think was not the effect of the poison, but that it had existed for some time, as it was for some form of dyspepsia that the patient was taking medicine.

The liver was healthy, as well as all the organs in the abdomen; there was no tinge of blue about the gall-bladder, or in its contents.

The contents of the stomach being taken to Dr. Letheby, of the London Hospital, were submitted to examination, in the first place, by putting them into a retort and distilling by means of a water-bath, by which process two drachms of fluid passed over, smelling of prussic acid, a portion of which being tested by the iron test gave evidence of the poison by the formation of Prussian blue, and afterwards, by testing with the nitrate of silver, a white precipitate was produced, insoluble in cold, but soluble in boiling nitric acid; and on heating the cyanide of silver in a small reduction-tube, cyanogen was evolved, which burnt with a purple flame; these tests satisfactorily proved the presence of prussic acid.

The next point to be considered was the determination of the quantity of prussic acid taken by the deceased. From information supplied by Mr. Hicks, it appears that one half of the mixture, which was intended for a lotion, yielded on distillation and the precipitation of the distilled liquid by nitrate of silver, nine grains of cyanide of silver. In the whole mixture, therefore, amounting to four ounces, there would be a quantity of prussic acid equivalent to eighteen grains of the cyanide of silver. This would amount, according to the usual calculation, to three grains and six-tenths of anhydrous prussic acid. The deceased had swallowed by mistake one-fourth part of this lotion: she had, therefore, taken *nine-tenths of a grain* of anhydrous prussic acid. Taking Scheele's acid at five per cent., this would be equivalent to eighteen grains, or rather less than twenty drops of Scheele;* and, on comparing it with the Pharmacopœal acid, at two per cent. this quantity of anhydrous acid would be equivalent to forty-five grains, or forty-nine drops.

Remarks.—This is probably the most interesting case of poisoning by prussic acid which has been yet recorded. The history is in every respect complete: the poison was accidentally swallowed in the presence of a person, who was able to observe and give a good account of the symptoms to Mr. Hicks. This gentleman arrived ten minutes before the death of the deceased, and noticed for himself some of the most striking symptoms; a complete inspection of the body was made—the post-mortem appearances were accurately noted, and lastly, the exact quantity of poison swallowed by the deceased, was most satisfactorily determined by a chemical examination of the lotion.

In respect to the symptoms, it would appear from the father's statement that he first heard a gasping noise, but there was no shriek or scream. This case, then, appears to put an end to the theory that poisoning by prussic acid is always accompanied by a "*death scream*" or "shriek,"—a subject of discussion at the trials of Belany and Tawell.† There was the slow laborious breathing at long intervals, foaming at the mouth, protrusion of the eyes, dilated pupils, pulselessness, and insensibility. Mr. Hicks states that there was no stertor; that during the convulsive fits the head and neck seemed to be spasmodically drawn down into the chest. The convulsions do not appear to have been so great as to affect the trunk. Emprosthotonos and opisthotonos were absent: a fact which may account for the want of evidence of a distorted or convulsed state of the body, with disturbance of the clothes, in persons who have been found dead in bed, and who have taken prussic acid. The most remarkable part of the case is, that the girl obviously retained volition and the power of locomotion for a short time after swallowing the dose. She was able from a sitting posture to assume the erect attitude, throw her arms above her head, and then run a short distance before she fell. When seen by Mr. Hicks she was perfectly insensible, and unconscious of everything that was passing around her. She made the same moaning noise before death, that was observed in the case of Sarah Hart.

The most striking of the post-mortem appearances were,—the fluidity‡ and dark color of the blood. It does not appear that the blood had any odor of prussic acid, although this odor, or rather a *sensation* which some experience in smelling the acid, instead of odor, *i. e.*, "*constriction of the fauces*," was perceived by some of those present on opening the cavities of the thorax and abdomen. The contents of the stomach smelt strongly of prussic acid, *i. e.*, gave a constricting sensation in the fauces, and this was observed *ninety hours* after death. In a case examined by Mr. E. Crisp, of Walworth, where it is probable a considerably larger dose of the poison was swallowed, there was no odor of prussic acid in any part of the body, although the examination was made seventy hours after death.[*] Facts of this description show that the detection of an odor is a very uncertain attendant on poisoning by prussic acid. The term "*odor*" appears, indeed, to be improper, when applied to a sensation experienced in the throat; many can detect no odor at all in prussic acid, although they have an undefinable sensation of its presence. One point is quite certain, that those who look for an odor of bitter almonds in these cases will commonly be deceived, and pronounce the poison to be absent. It is very easy for a person who has tried some experiments on the subject to distinguish the smell of prussic acid from that of bitter almonds; but it is a question whether many do not actually seek for the smell of the latter, as evidence of the presence of the poison.

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* Two drachms of what was said to be Scheele's acid were put into the bottle, but the analysis proved that the acid must have been under the strength of Scheele.

† Another case of Poisoning by prussic acid, without any "shriek, or scream," was reported in the Medical Gazette of last week. See page 859. Mr. Hicks took especial care to ask the father as to the kind of noise made by the patient on taking the poison, and from the description he gave, it does not warrant the assumption that any peculiar shriek is made in death from prussic acid. It was a mere gasping for breath. See also a third case, Edinburgh Medical and Surgical Journal, Vol. 48, p. 44.

‡ In Dr. Meyer's experiments on animals, the blood was found coagulated. Schmidt's Juhrbücher, 1844.

It is not a little singular that, in this case, the odor of prussic acid was more distinctly recognized in the thorax than in any other cavity! Some who were present perceived it more strongly in the chest than in the abdomen, even after the stomach itself had been laid open.

The only other appearances remarked, were congestion of the lungs and brain. The heart was filled with blood; the aorta empty. There was no blue tint in the contents of the gall bladder; the kidneys had a pinkish color, and were much congested.

The most important fact which this case discloses remains to be mentioned; it settles beyond all dispute that the *life of a healthy adult may be destroyed by a dose of anhydrous acid equal to nine-tenths of a grain.* Dr. Geoghegan[†] has described a case in which a gentleman narrowly escaped with his life after having swallowed a quantity of the acid equivalent to *thirty-six* drops of the London Pharmacopœial acid. In Mr. Hicks's case a quantity equivalent to *forty-nine* drops of the same acid was taken, and the person died in twenty minutes. In a case reported by Dr. Banks, a female recovered after taking thirty drops of an acid, the strength of which is not stated![‡] It is, however, quite possible that a person might die from a smaller dose than that taken by the deceased in this instance, because circumstances may cause the effects of the same dose to vary in its operation on different persons. Another point worthy of remark is, that the quantity which certainly killed this woman was actually less than that which was found to be present in the stomach of the woman Hart; and yet it was absurdly attempted, in the defence of Tawell, to show that there was not enough of the poison found to destroy life! We have, then, in the cases of Dr. Geoghegan, and Mr. Hicks, the clearest proof—1, that a person has recovered from a quantity equivalent to thirty-six drops of P. L. acid (fourteen of Scheele); and 2d, that a person has died from forty-nine drops of the P. L. acid (twenty drops of Scheele[§]). It appears to be impossible to have the fatal dose of a poison fixed with greater precision.—*London Medical Gazette*, April, 1845.

MISCELLANEA.

9. *Combination of Copaiba with Purgatives in Gonorrhœa.*—From an account given by M. Jacquetant of the Hospital practice of M. Diday, it would seem that the balsam of copaiba acts much more energetically in the removal of gonorrhœa if combined with purgatives. The formula which M. Diday found most successful, was three drachms of the balsam of copaiba, four drachms and a half of the powder of cubebs, and forty-five grains of the powder of jalap, made into an electuary, of which one half is taken in the morning and the remainder in the evening. The treatment rarely lasted more than five days, by which time a permanent cure was in general effected.—*Gazette Médicale de Paris* and *Edinburgh Medical and Surgical Journal.*

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[*] Lancet, Sept. 14, 1844.

[†] Dublin Medical Journal, vol. viii., p. 308.

[‡] Edin. Med. and Surg. Journ. Vol. xlviii., p. 44.

[§] It is here assumed that Scheele's acid contains 5 per cent. of anhydrous acid, but it is seldom found so strong as this.

10. *Acetate of Iron as a Remedy for Arsenical Preparations.*—The hydrated peroxide of iron is of admitted efficacy in cases of poisoning with uncombined arsenious or arsenic acid ; but according to the experiments of Duflos, it is quite ineffectual when these acids are combined with bases, as for example, Fowler's solution, or arsenite of potash, or arseniate of potash, which last is frequently employed in calico-printing, and is consequently easily procured.

In the uncertainty in which the practitioner may be placed as to whether the arsenical poison be free or combined, it is very important to administer the oxide of iron in such a form as to produce a favorable result : to this end it is convenient to employ the peracetate of iron.

This compound may be prepared by adding to the hydrated peroxide of iron obtained from the decomposition of four parts of liquid perchloride of iron, three parts of acetic acid, of density 1.06, and sufficient water to make up 16 parts.

This liquid which is a solution of peracetate of iron with excess of base, precipitates arsenious and arsenic acid from all their solutious, either free, or combined with any base ; 500 grains of it are sufficient to decompose 1880 grains of Fowler's solution.

This result demonstrates that liquid peracetate of iron merits preference in cases of poisoning by arsenical compounds. It should be remembered that its power is more rapid in proportion as it is more diluted with water ; besides which, large dilution prevents all irritating action of the acetic acid set free.—*Ibid., from Jour. de Ch. Méd.*, Novembre, 1844, as inserted in the *Philosophical Magazine.*

[The mode of preparing the above compound is not very clearly stated, for the strength of the liquid perchloride of iron is not given. It may be presumed that peracetate of iron mixed with peroxide is to be employed ; the degree of excess of the latter is of little consequence, and the strength of the peracetate is limited by the employment of four parts of acetic acid of 1.06 made up to 16 parts with water, and this, it appears, is to be largely diluted before exhibition.—Ed. *Phil. Mag.*]

As this is an important antidotal remedy, and as the term "liquid perchloride of iron" may tend to confuse many, perhaps it will be proper to state that the same preparation may be made by taking any quantity of hydrated sesquioxide of iron, prepared according to the U. S. Pharm., dividing it into two parts, then adding to one portion just as much acetic acid, of any strength, as will dissolve it, afterwards adding the other portion of hydrated oxide, and finally, as much water as will make it of the consistence of cream.—Ed. *Amer. Journ. Pharm.*

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11. *Valerianate of Quinine—its Therapeutic Employment—Mode of Preparation and Administration.* (Translated from the French—*L'Abeille Medicale.*)—Dr. Francis Devay, Physician to the Hôtel-Dieu de Lyon, through an essay published in the *Gazette Medicale*, directs the attention of practitioners to a new combination of valerianic acid with a vegetable alkali—quinine. We are induced to augur favorably of this union of the active principle of valerian to the medicinal agent of the most powerful of our exotic products. According to Mr. Devay, this provision is fully justified by clinical verification : valerianate of quinine in small doses is anti-periodic, very effectual, and superior to the sulphate by its nevro-sthenic properties.

Doubtless the gastro-intestinal accidents produced by this latter salt have been much exaggerated ; still, it is no less true that the sulphate is much more irritating than the bark in substance ; first, by reason of its greater solubility ; and again, because it has not the corrective properties possessed by the Peruvian bark, viz.—tannin.

It is not so with the valerianate. In this last product the quinine is modified by its intimate association with a vegetable acid, which, to a slightly perturbating action upon the nervous system, joins those eminently characteristic of Peruvian bark. There is, in this, a fact connected with therapeutic dynamics, concerning which we cannot too much engage physicians to consider attentively. Thus, as we said before, in our first memoir, valerianate of zinc is an antispasmodic raised to its highest power ; so valerianate of quinine is a medicine endowed with *anti-periodic* powers of the greatest energy. This is a fact we have acquired through numerous cases zealously collected several months since. But it is due to us to say, that the administration of the valerianate will for a long time expose the practitioner to mistakes, until the apothecaries generally become experienced in its composition, and in all the minute and delicate preparations required by it. Mr. Devay remarks, that to judge of the therapeutic action of valerianate of quinine, it is necessary, first of all, to satisfy ourselves of the excellence of its composition. His experiments were made with valerianate of quinine, prepared under his supervision by Mr. Guillermond, a skilful pharmaceutist of Lyons.

Characters.—According to the analysis of the Prince of Canino, who was the first to prepare and describe valerianate of quinine, this salt is formed of one equivalent of valerianic acid, one of quinine, and two equivalents of water, of which one constitutes its water of crystallization. The crystalline form of this salt is very different ; it is octœdrical or hexædral. We have ourselves obtained it in hexædrons, flattened on two faces, and forming rhomboidal tables perfectly characterized. It is often agglomerated in light, silky masses. Independent of this last fact, the crystals are hard and tolerably heavy.

Valerianate of quinine has a slight odor of valerianic acid, and a decided bitter taste, recalling that of cinchona. It dissolves with facility in water at a common temperature. Alcohol is a better solvent ; and olive oil dissolves it equally well, assisted by a slight heat. The mineral acids, and most of the organic acids, decompose it. Submitted to a heat of about 90°, crystallized valerianate of quinine loses an equivalent of water, softens, and melts like a resinous substance. Deprived of water, it is rendered insoluble in this liquid, while, on the contrary, it is very soluble in alcohol. Exposed to a higher temperature, it cannot be made to part with its other equivalent of water, but is decomposed, and mono-hydrated valerianic acid vapors are seen to escape from the resinous mass. The aqueous solutions of this salt, exposed to the heat of boiling water, also decompose, and oily drops are seen to float upon the surface of the liquid, which cannot be made to redissolve in the water, except by means of spirit of wine, and is nothing more than mono-hydrated valerianate.

Preparation.—To a concentrated alcoholic solution of quinine add valerianic acid in slight excess. Dilute the alcoholic solution with twice its volume of distilled water ; mix intimately, and evaporate in a stove at a heat not surpassing 122° Fahr. After the evaporation of the alcohol, the valerianate is exhibited in the form of handsome crystals, here and there grouped or isolated, which increase from day to day.

The valerianate of quinine may likewise be prepared by double decomposition, in mixing sulphate of quinine with valerianate of lime or baryta, both being dissolved in weak alcohol. We have ourselves obtained this salt in mixing an alcoholic solution of the neutral sulphate of quinine with an alcoholic solution of valerianate of potash.

The process succeeds, after several successive trials, to insure the perfect decomposition of the two salts. These methods are only good in saving time ; it is far better to act in a direct manner, so as to have finer and purer products.

Whatever mode of preparation be adopted, it should always be borne in mind that the solution must be evaporated slowly, with a gentle heat, and the crystals not be separated from the mother waters except to dry them in the open air.

Valerianate of quinine may be distinguished as follows :—

1st. A concentrated alcoholic solution of valerianate of quinine precipitates the concentrated neutral aqueous solution of nitrate of silver : this precipitate is redissolved in a large quantity of water.

2d. An aqueous solution of valerianate of quinine does not precipitate one of chloride of barium.

3d. This aqueous solution, submitted to ebullition, allows some oleaginous drops of melted hydrated valerianate to separate.

4th. If this solution be treated with acids, valerianic acid is disengaged, which may easily be recognized by its odor ; and if this decomposition be effected with crystallized valerianate of quinine and a concentrated liquid acid, valerianic acid will be obtained in an oleaginous form.

Mode of Administration.—Like the valerianate of zinc, this of quinine being very delicate, or more correctly speaking, easily decomposed, it is best to administer it in the most simple form : in this belongs a necessary condition to its successful use.

We mostly give it in a gummous solution. Five decigrammes of the salt, (8 grs.) according to our experiments with Mr. Guillermond, dissolve easily in 100 grammes of gummous vehicle. One of the great advantages of valerianate of quinine is to be able to dissolve it easily in oil, and use it in this manner for frictions and embrocations upon the region of the spleen. With this object we have made use of the following liniment :

℞ Olive oil	. . . .	60 grammes.
Valerianate of quinine,	.	1 gramme.

For neuralgia we use commonly pills containing 6 centigrammes each, prescribed in the simplest manner.

To appreciate the therapeutic value of valerianate of quinine, Mr. Devay reports, out of many cases under his observation, 14, for the most part severe and complicated intermittent fevers, which were cured by the administration of valerianate of quinine, when the sulphate even proved abortive. Each dose from 10 to 40 centigrammes (1 1-2 to 6 grs.) a day, according to circumstances. The author cites no instances of failure, and mentions no inconvenience resulting from the employment of this new therapeutic agent.

He concludes thus :

1st. Valerianate of quinine is a superior antiperiodic to the sulphate by its nevro-sthenic properties, and because it acts in smaller doses.

2d. Its pure and simple administration is of equal value with that of cinchona and the *névritiques* combined.

3d. In fevers of the worst character (ataxiques-malignes) it is thought to render the most eminent services by its specific properties.—*Amer. Jour. Pharm.*

12. *Conversion of Benzoic into Hippuric Acid.*—Dr. James E. Booth and M. H. Boyè of Philadelphia, have published in the "Transactions of the American Philosophical Society," a valuable paper *on the Conversion of Benzoic into Hippuric Acid*, accompanied with numerous experiments, embodying the following results :

1. The formation of uric acid in healthy urine is not affected, either in regard to its quantity nor to its external properties in general, by the introduction and transformation of benzoic acid into hippuric acid in the system.

2. The time required for the benzoic acid to pass through the system, and reappear as hippuric in the urine, is from twenty to forty minutes after its introduction with food into the stomach. Its occurrence continues for four or eight hours, but then ceases.

3. The quantity of hippuric acid obtained from the urine is greater than that of the benzoic acid taken. In round numbers it may be stated to be one-third more.

4. Urea is not in combination with the hippuric acid in the urine.

5. The base with which the hippuric acid is combined, and which keeps it in solution, is ammonia.

2.

American Medical Intelligence.

New Works.—Professor Gross is now in Philadelphia, superintending the publication of a new edition of his Elements of Pathological Anatomy, which will be issued in a single volume during the summer. The new edition will embrace whatever has been furnished to the author by his reading or observation in the last five years, not contained in the present edition, and will make an addition to the work of nearly three hundred pages. Many portions have been re-written, a number of new chapters have been introduced, and the illustrations by woodcuts multiplied to an extent which must very materially enhance the value of the treatise to students of medicine.

Professor Gross has also been engaged upon a new edition of Liston's Elements of Surgery, which will be ready for press early in the autumn.—*Western Journal.*

Accident to Professor Paine.—We are happy to learn that Professor Paine, who recently received a severe injury by the upsetting of a stage, near the village of Ballston Spa, is rapidly recovering, and will soon be able to resume his usual avocations. As many erroneous statements have been published in relation to the manner in which the accident occurred, as well as the nature of the injury received, the following particulars derived from Dr. P. himself, will not be uninteresting: The stage, at the time of the accident, was laden with thirteen passengers, and was drawn by high-mettled and unmanageable horses. Dr. Paine perceiving the danger, repeatedly requested the driver to stop on arriving at the top of a high hill, at the bottom of which was a bridge at an elevation of some fifteen feet above the rocky bed of a small stream below. At the moment of passing the bridge, the outside rein of the off horse gave way, which, by the efforts of the driver to hold the horses, brought the leaders suddenly round, and the carriage was precipitated into the mud and water below. Dr. Paine was taken out almost immediately, in a state of insensibility, from which he soon recovered. On examination, it was found that his collar bone and two or three ribs of the left side were fractured; these, together with some bruises, and a severe concussion of the vital organs, rendered his situation very precarious for a day or two; but, from letters just received, we are glad to learn that he is rapidly convalescing. We trust that medical science may enjoy the benefit of his talents, learning, and research, for many years to come.

American Medical Journals.—If we are to judge of the progress of Medical science in this country by the rate at which Medical Journals are multiplying, we must certainly arrive at the conclusion that it is advancing with a most gigantic stride. We will enumerate them:

1. First, in priority of date, if not of merit, stands "*The Boston Medical and Surgical Journal,*" a periodical of established repu-

tation, both at home and abroad. The Editor, Dr. J. V. C. Smith, with whom our acquaintance dates anterior to the issuing of his first number, in February, 1828, and who, from that day to this, has constantly grown in our esteem, is admirably calculated to conduct a work of this kind. To a correct knowledge of every branch of his profession, he unites an acquaintance with the whole circle of the natural and physical sciences; a peculiar tact; great industry and perseverance; a kind and amiable disposition, which seems to shield everything but downright quackery; in short, he possesses all the qualifications necessary to give interest and value to such a publication.

His Journal, which, fortunately for its readers, is a *weekly*, reflects the character of its conductor, and enjoys a wide circulation in every part of the country. We wish it a long and an honorable career; and if we judge of the degree of vital force, from its manifestations, there is none that promises greater longevity than the "Boston Medical Journal." Two or three other Journals have been established in Boston since the publication of this, but none of them reached beyond a few numbers. *Esto perpetua.*

2. The "*American Journal of the Medical Sciences*," established in the fall of 1828, under the editorial management of Dr. Isaac Hays, is perhaps too well known to our readers to need any particular remark. It succeeded in the place of the "Philadelphia Journal of the Medical and Physical Sciences," conducted by Professor Chapman, and has always enjoyed a high reputation. The publishers, by their ample means, have been able to obtain the co-operation of the most distinguished medical men throughout the Union, as will appear from an examination of their list of contributors. The Journal has done much to advance the interests and character of the profession, and is recognized as high authority in medical matters, both in this country and in Europe. The Editor has been charged, whether justly or not we do not pretend to say, with manifesting somewhat of partiality towards Philadelphia authors and Philadelphia publishers, and of overlooking those of New York especially. But those who bring such an accusation, forget, perhaps, the Scripture precept, that "charity begins at home;" and the Editor may think that New York is big enough to take care of herself. One thing is acknowledged, that some of the ablest papers that have ever appeared in the Journal, have been written by New York Physicians, and without their co-operation the work would have lacked much of its interest and value. It continues to be well sustained, and must be a source of profit to both Editor and Publishers.

3. The "*Western Journal of Medicine and Surgery*," edited by Drs. Drake, Yandell and Colescott, and published at Louisville, Ky. This is a monthly journal, which has now reached its 66th number, and is conducted with much talent. Its original communications are generally of a high order of merit, and its reviews are judicious, discriminating and candid. It is doing much for medical science in the West, and we hope has a long and prosperous career before it.

4. The "*Western Lancet, devoted to Medical and Surgical Science*," is published monthly at Lexington, Ky., and under the editorial charge of L. W. Lawson, M.D., Professor of General and Pathological Anatomy and Physiology, in Transylvania University. The Editor is now on a trip to Europe for a few months, and, in the meantime, the "Lancet" is to be conducted by his colleagues, Drs. Mitchell and Peter. The

same remarks will apply to this, as to the "Western Journal," though its circulation, we are told, is somewhat more limited.

5. "*The Southern Medical and Surgical Journal*," published monthly, at Augusta, Ga., is edited by Paul F. Eve, M.D., and J. P. Garvin, M.D. This is the official organ of the Medical College of Georgia, and is very ably conducted. Its original communications are interesting and important, and its reviews and selections judicious.

6. "*The New Orleans Medical Journal, devoted to the cultivation of Medicine and the Associate Sciences*," is a bi-monthly, and has just reached its 6th number. The Editors are E. D. Fender, and A. Hester, M.D. This Journal has already taken its rank as one of the ablest and best conducted in the country. It certainly is indispensable to those who wish to become thoroughly acquainted with southern diseases, their causes, pathology and treatment.

7. "*The Bulletin of Medical Science*," edited by John Bell, M.D., Philadelphia (monthly), is, doubtless, well known to all our readers. Its veteran Editor has identified his name with so many important works, that it has become as familiar as a household word. It is difficult to say in which character he is best known, whether as a Lecturer, Editor, Author, or Practitioner; in all, Dr. B. has acquired a reputation of no ordinary kind; and we hope may long live to enjoy the well earned trophies of an honest and an honorable fame.

8. "*The Medical Examiner and Record of Medical Science*," edited by R. M. Huston, M.D. This Journal, which also hails from Philadelphia, has been lately much enlarged and improved, and is a highly useful periodical. Although its original communications are not very numerous, they are always interesting; and its Reports of Clinical Lectures constitute one of its most important features. We know not how it is, that three Medical Periodicals can not only be supported, but actually thrive in our sister city, while one is thought to be adequate to the wants of New York. A Journal, however, that is conducted as well as the "Examiner" is at present, may be expected to flouirsh in any place where medical men abound.

9. "*The Missouri Medical and Surgical Journal*," edited by H. F. Stevens, hails from the city of St. Louis, and is the organ of the Medical Faculty of Kemper College. This is a monthly, of 24 pages, the first number of which has just appeared.

10. "*The St. Louis Medical and Surgical Journal*," edited by M. L. Linton, M.D., is the organ of the Medical Department of the St. Louis University (monthly). This has reached the 14th number, and, like the last, is very well got up.

11. "*The Illinois Medical and Surgical Journal*," edited by J. V. Z. Blaney (monthly, 16 pages). The organ of the Medical College of Illinois, at Chicago.

12. "*The Buffalo Medical Journal*," under the editorial charge of Prof. Austin Flint, M.D. This is a new candidate for Professional favor; and from the high reputation of the Editor, who is known as one of our most accomplished physicians and talented writers, we augur no common success to the undertaking.

13. "*The American Journal of Insanity*," edited by the Officers of the New York State Lunatic Asylum, at Utica, completes the list of Medical Periodicals, so far as we are informed, that are at present published within the United States, with the exception of the

14. "*American Journal of Pharmacy.*" These works are both of them too well known, to require any praise or comment at our hands.

The Annual Report of the New York City Inspector.—Our notice of this Report has been crowded out of our present number, but will appear in our next. The whole number of deaths reported for the year 1844, is 8955; being 262 more than those of the preceding year, and 221 less than in the year 1842. Of these, there were white males, 4534; white females, 3903; colored males, 219; colored females, 219; premature and still births amounted to 828. Total deaths, exclusive of still born, 8127. The number of white males exceeded that of the females more than 16 per cent., a fraction above that of 1843; and this excess, for some reason, is constantly on the increase. The number of deaths of colored persons is the same. The relative number of still and premature births appears to be increasing, being 1 in 1081; whereas, in 1836, they were only as 1 to 1780. Is this disparity owing to the operations of Madam Restell, Costello, and their collaborators? The deaths by small pox, measles, and cholera infantum, are 213 less than in 1843; while scarlatina, hooping cough, croup, remittent and typhus fever, show an increase of 250. The deaths from nervous diseases appear to be on the increase, and hydrocephalus has become the most formidable disease to which infants are exposed.

Dr. McClelland.—We regretted that unavoidable engagements, deprived us of the pleasure of being present on the occasion alluded to in the following notice, which we copy from one of our daily papers. We can bear testimony to the urbanity as well as faithfulness of Dr. McClelland, and to the talent and energy which he displayed in the discharge of his important duties while in charge of the Hospital at Bellevue.

"*Presentation of Plate.*—Amidst the general selfishness and bitterness of feeling that is displayed by office-holders, more particularly when the guillotine has been applied, it is refreshing to find one instance of liberal ideas and spirit manifested. The occasion to which we allude, is the presentation of a handsome silver pitcher to Dr. John McClelland, who has, for the last year, filled the place of Resident Physician to the Alms House, by the various medical assistants who have been attached to that institution during his *régime.* The affair came off at the Carlton House, and the pitcher, which bore the following inscription,

PRESENTED TO
JOHN McCLELLAND, M. D.,
By his Medical Assistants in the Alms House establishment of the city of New
York, as a testimonial of regard for his professional attainments and social virtues, May 12, 1845,

was presented to the worthy Doctor by Dr. Tilden Brown, in a most appropriate speech, which was replied to in a feeling manner by Dr. McClelland. This part of the business being concluded, the company, which included some of the most eminent medical and surgical talent in the city, adjourned to the dining room, and partook of an elegant supper with the greatest zest. The cloth being removed, some most excellent remarks were made by Dr. Wood, complimentary to Dr. McClelland, in reference to the activity with which he had performed his duties not only to the patients of the Institution, but in his endeavors, by means of the great medical school which he had control of, to advance clinical instruction, which is of so much importance to the student. He stated that the Doctor had always been most anxious to throw open all the resources of the establishment to those seeking to advance themselves in their profession, and he regretted more had not availed themselves of the opportunity. He was followed by Dr. McClelland, and Dr. Hasbrouck, the present incumbent of the office. Dr. FRANCIS made an excellent speech, in the course of which he adverted, in the most impressive terms, to the great attention that should be paid to clinical instruction, and concluded by proposing as a toast—'A generous intercourse among the members of the Medical profession.' He called on Dr. PARKER, who called on the profession to endeavor by the cultivation of good feeling, one with another, to do away with all that might lead to the common complaint of the jealousy that was said so frequently to be found among its members. It was by the means of such social meetings as the present that much was done to do away with such ideas. He was glad to hear that diplomas for services were bestowed on the assistants of the medical department of the Alms House by the Board of Commissioners ; such testimonies of approbation proved a stimulus to the young men, and were of much service to them. A spirit of emulation was to the last degree important in medical education, and he was glad that the establishment of a new medical school in this city added to that feeling. He concluded by proposing the memory of Dr. Wm. Pitt Canning, a young surgeon of much promise, who had served a term at Bellevue, but on being transferred to the naval service had unfortunately fallen a victim to the yellow fever on board the Vandalia in her late cruise. We were, at this stage of the proceedings, obliged to leave, much to our regret, as the commencement of the evening promised to ripen into one of delightful and dignified enjoyment."

Spring Course of Lectures at the New York Hospital.—According to previous notice, a meeting of the Medical Class attending the practice and Spring Course of Lectures of the New York City Hospital, was held in the Lecture Room of said Institute on Saturday, May 10th, 1845. The meeting having been called to order by Dr. S. S. Satchwell, on his motion, Dr. P. A. Aylett, of Alabama, was called to the Chair, and Dr. William B. Squires, of New York, appointed Secretary. The Chairman having explained the objects of the meeting, on motion, a committee of five were appointed to present resolutions expressive of the views of the meeting. The committee, consisting of Drs. Satchwell, Stevenson, Moffatt, Grattan and Power, after due deliberation, reported the following resolutions, which were unanimously adopted :

1. *Resolved*, That we hereby tender our thanks to Drs. Post, Griscom, Buck, Reid, Watson and Swett, for the very valuable and instructive course of Lectures which they have delivered at this Hospital during the present spring, and we also tender to those gentlemen our grateful acknowledgments for the kindness and zeal which they have manifested for our professional improvement.

2. *Resolved*, That inasmuch as Dr. Swett, whom we regard as second to no pathologist in this country, has not yet completed his course on Diseases of the Chest, he be, and is hereby, requested to continue his Lectures, if consistent with his convenience.

3. *Resolved*, That the proceedings of this meeting be signed by the Chairman and Secretary, and published in the next number of the New York Journal of Medicine. P. A. Aylett, *Chairman.*

Wm. B. Squires, *Secretary.*

Dr. Samuel L. Metcalf.—After a residence of ten years in Europe (chiefly in London), where he has acquired a distinguished reputation as a medical writer and philosopher, this gentleman has recently arrived in our city, which he purposes to make his future residence. Dr. Metcalf is well known to many of our readers as the author of an ingenious work on "Terrestrial Magnetism." Since his residence abroad, he has published a large work in two volumes, 8vo., of 1100 pages, entitled "Caloric, its mechanical, chemical, and vital agencies in the phenomena of Nature"—which has been most favorably noticed in many of the leading reviews and journals. We are happy to learn that the talented author is about to republish the work in this city—a work which we do not hesitate to pronounce one of the ablest and most interesting that has ever appeared from the American press. The author writes with great clearness and force, and his views on different questions in physiology are not only distinguished for uncommon originality, but are defended with an array of facts and reasonings, which cannot fail of carrying the reader along with him. We congratulate the profession in this city, on the acquisition of so valuable a member.

Progress of Hydropathy.—Since the issuing of our last number, we have noticed in the newspapers, that the *shower-bath* has been introduced into several of our State Prisons and Penitentiaries, in the place of whipping and other modes of corporeal punishment.

This speaks well for *hydropathy*, and will doubtless tend to make the practice fashionable among the "upper ten thousand," who are in the habit of being influenced by such high examples. As Captain Claridge tells us as the result of his own observations (*on Hydropathy*, p. 122), that the hydropathic treatment produces a "vitiated condition of the blood, dryness and roughness of the skin, pimples, boils, ulcers, abscesses, violent headaches, dizziness, tremor of the limbs, nausea, vomiting, diarrhœa, and fever"—all of which are regarded as salutary efforts of nature to expel morbid matter from the blood—who can tell but that the same despumatory process may also expel some of the bad humors from the mind, and thus powerfully tend to the reformation of convicts?

Health of the City.—The health of the city was never better, at the same period of the year, than it is at the present moment. Every physician who has been resident in this city for the last fifteen or twenty years, cannot but be struck with the vast disproportion in the amount of disease, at the present time, compared with what it was but a few years ago. This is attributable to a variety of causes; temperance,—the improved habits of the people with respect to foods and drinks; a more general acquaintance with the structure and functions of the animal economy—improvements in the ventilation of public and private dwellings—and especially in the introduction of the Croton water. We wish it were in our power to add, greater cleanliness of our streets, and the more general habits of bathing—but these are at present to be regarded in a prospective point of view,—as things to be hoped for and prayed for, but not as positive realities.

Much excitement has been got up in relation to the small pox, and as always happens in such cases, exaggerated reports have been spread throughout the country, which have prevented many persons coming to the city. There has been no just cause of alarm at any time ; it may, however, serve the useful purpose of calling public attention to the importance of vaccination ; and if, in consequence, a general re-vaccination takes place, the public will be greatly benefited, to say nothing of the profession, and there will be no cause to regret the occurrence of the panic.

The Annual Spring Course of Lectures at the College of Physicians and Surgeons, and the New York Hospital.—The Courses of Lectures, annually delivered in the spring at these Institutions, have just been brought to a close. The classes in attendance, we believe, were quite numerous, and entirely satisfied with the courses of instruction. The advantages of New York for clinical instruction are now so well understood, that we need but allude to the subject at this time. These advantages, we are happy to know, are becoming better appreciated every year ; and the time, we believe, is not remote, when New York will stand as pre-eminent for medical instruction, and the cultivation of medical science, as it now does for wealth, population and commercial enterprise.

Dr. Williams' Medical Biography.—A few copies of this excellent work still remain on sale at Messrs. Langley's book-store, 8 Astor House. We are surprised to find that the first edition has not been completely exhausted long since ; it can only be accounted for from the fact that an uncommonly large edition was struck off. We sincerely trust that the able author, who has prepared the book, to perpetuate the memory of distinguished members of the profession, now deceased, may not only have the satisfaction of contemplating a noble deed, nobly performed, but of realizing something from the publication, that he may be able in some degree to abridge the labors of an arduous practice, and find time for the preparation of another volume, which is necessary to complete the work.

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Art. XXV.—A Valedictory Address, delivered by G. S. Bedford, A.M., M.D., Professor of Midwifery and the Diseases of Women and Children, in the New York University; on the evening of Feb. 28, 1845. Printed for the Class. 1845, ... 240

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2. Report of the Joint Select Committee to whom was referred that part of the Governor's Message which relates to the Insane Poor. Mass. Session, 1845. Document No. 11, 1845. Pp. 14, ... 242

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TO READERS AND CORRESPONDENTS.

☞ Our next Number will contain a letter from Professor Mott to Mr. Liston of London, on operations on the Jaw; Recent proceedings of the "New York Medical and Surgical Society;" communications from John Watson, Alfred C. Post, T. A. Tellkampf, S. L. Metcalfe, and Dr. N. Shearman, &c., of this city; Drs. S. W. Williams, of Deerfield, Mass., and B. Dowler, of New Orleans; Professor Caldwell, of Kentucky; Professor Shipman, of Cortlandville; and Dr. Gardner, of Newburgh. Also, one or more Reports from the Surgeon General's office, U. S. A.

The reader will perceive that the Original Department of our Journal continues to be ably supported. We are glad to announce, that we have proffers of assistance from many parts of the United States, and the increase of our circulation is more than commensurate with our highest expectations. We trust our friends and the profession generally, will not relax in their efforts, but continue to make our Journal the medium of their communications.

We are happy to announce to the subscribers of the "New York Journal of Medicine," that a copy of "*Ranking's Half Yearly Abstract of the Medical Sciences*" will be sent to all who pay in advance, forming two volumes of nearly 400 pages each, annually. The first vol. of the English edition just issued for the half year ending, June, 1845, forms an octavo of 391 pages, the annual subscription price being 13*s*. sterling. We are informed by the Editor that every periodical work of note published in Great Britain, America, France and Germany, is subscribed for and consulted; and that "every new and standard publication and monograph which can be obtained is analyzed as it may come to hand." The work will embrace every department of Medical Science, and "each department is entrusted to men who have distinguished themselves in that branch of their profession."

By this arrangement we shall be able to present to our readers, a very large amount of valuable medical intelligence (making over 1650 large octavo pages annually), arranged and digested in a most useful and systematic manner. This will leave us at liberty to devote our pages chiefly to original communications, bibliographical notices, and American intelligence. The subscription of the Journal will remain the same, $3 00 (including Ranking), always payable in advance. The first No. of Ranking will be sent with the present No. to all who have paid their subscription for the present year; it will also be punctually forwarded to all who send on the amount of arrearages and to all new subscribers.

We have to acknowledge the receipt of the following works since our last number:

Caloric: its Mechanical, Chemical, and Vital Agencies in the phenomena of Nature. By Samuel Metcalfe, M.D. London: 1843. 2 vols., pp. 1100.

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The Dispensatory of the United States of America. By George B. Wood, M.D., Prof., &c., and Franklin Bache, M.D. Sixth Edition, carefully Revised. Philad., 1845.

A Treatise on the Diseases of the Sexual Organs, adapted to Popular and Professional Reading, and the Exposition of Quackery, Professional and otherwise. By Edward H. Dixon, M.D. New York: Burgess, Stringer & Co. 1845. 12mo. Pp. 260.

Elements of Materia Medica and Therapeutics. By John B. Harrison, M.D., Professor of Materia Medica and Therapeutics, in the Medical College of Ohio. Vol. I. 8vo. Pp. 405. Philad., 1845.

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Dissertation on the Progress of Ethical Philosophy, chiefly during the 17th and 18th Centuries. By the Right Hon. Sir James Mackintosh, LL.D., with a Preface by the Rev. Wm. Whewell, A.M., Fellow of Trinity College, Cambridge. Philadelphia: 1845.

The Field and the Work of the Medical Profession. An address delivered before the Associated Alumni of Castleton Medical College, at their annual meeting, June 18, 1845. By Horace Eaton, M.D., of Enosburgh, Vermont. Published by request. Albany, 1845.

Essays on Pathology and Therapeutics, being the substance of the Course of Lectures, delivered by Samuel Henry Dickson, M.D., Professor of the Institutes and Practice of Medicine, in the Medical College of the State of South Carolina. 2 vols., 8vo. Charleston, 1845.

An Elementary Treatise on Midwifery; or, Principles of Tokology and Embryology. Alfred A. M. Velpeau, M.D., &c. Translated from the French, by Charles D. Meigs, Professor of Midwifery, in the Jefferson Medical College. Third American Edition, with notes by Wm. Harris, M.D., Lecturer on Midwifery and the Diseases of Women and Children. Philadelphia, 1845.

The Medical Remembrancer, or Book of Emergencies, &c. By Edward B. L. Shaw, M.R.C.S. and L.A.S., &c. Revised and Improved by an American Physician, New York: S. S. & W. Wood, 1845.

The American Quarterly Journal of Agriculture and Science. Conducted by Dr. E. Emmons and A. J. Prime. Vol. ii. Nos. July, August, September. Albany. (The only number received.)

Lectures on the Theory and Practice of Surgery. By the late Abraham Colles, M.D., for thirty-four years Professor of Surgery in the Royal College of Surgeons, in Ireland. Edited by Simon M'Coy, Esq., F.R.C.S.J. 8vo. Philadelphia, 1826.

Kosmos. A survey of the General Physical History of the Universe By Alexander Von Humboldt. New York: Harper & Brothers. Part 1.

The Fruits and Fruit Trees of America, or the Culture, Propagation, and Management, in the Garden and Orchard, of Fruit Trees generally; with descriptions of all the finest varieties of Fruit, Native and Foreign, cultivated in this country. By A. Downing. New York, 1845.

Catalogues and Circulars from the Medical Department of the City of New York; The College of Physicians and Surgeons of the City of New York; Massachusetts Medical College; the Baltimore College; the Willoughby Medical College; Bowdoin College; the Berkshire Medical Institution; the La Porte University; Rush Medical College at Chicago; Hampden Sidney College.

The remainder in our next.

☞ All letters in regard to the *business* department of the Journal, and all remittances of money, should be addressed *exclusively* to the Publishers, J. & H.G. Langley; but books for Review, and Communications designed for publication, should be directed, *free of expense*, to the Editor of the New York Journal of Medicine, care of J. & H. G. Langley, New York. Persons at a distance, may direct parcels paid as above, under care of Barrington and Haswell, Philadelphia, W. D. Ticknor and Co., Boston, and Wiley and Putnam, London.

THE NEW YORK
JOURNAL OF MEDICINE.

FOR SEPTEMBER, 1845.

PART FIRST.

Original Communications.

ART. I.—*An Address delivered before the Medical Society of Westchester County, at their Annual Meeting, held June 3d*, 1845. BY JAMES FOUNTAIN, M.D., Fellow of the College of Physicians and Surgeons of the University of New York, President of the Society.

GENTLEMEN,—The duty of addressing you at this time having devolved on me, I shall endeavor to discharge it to the best of my humble ability; claiming that you will charitably take into consideration the broken life, the limited time, the fatigues, the meager opportunities, and other difficulties attending a country practice, with which you must all be familiar.

The time allotted to the holding of our meeting being so very short, we can barely transact our ordinary business. On this account, I must of necessity be very brief in my remarks.

The subject which I have selected for the present occasion is the *Phlegmasia Dolens*. This disease, gentlemen, I am fully persuaded has not received that share of attention its importance demands: nor do I flatter myself that I shall do it a full measure of justice in the short space of time to which I am necessarily limited.

When I first settled myself in my present location, something over thirty years ago, I found an interesting young female, the wife of a near neighbor, just emerging from a six months' confinement; another lady only a few miles distant had an indolent ulcer called a fever sore, which had been open several years, and which continued till her death, twenty years more; another had a leg like an elephant, for life,—and all from phlegmasia dolens, either maltreated or neglected.

These sad tales made a deep impression on my mind, and unless I am greatly deceived, they have led to results rather more favorable than these melancholy terminations.

Phlegmasia Dolens, it seems, has been known and described about two hundred years, by very many authors under different appellations, growing mostly out of its supposed pathology, as *phlegmasia lactea, anasarca serosa*, &c. Many supposed the disease consisted in an inflammation of the absorbent vessels, which, at length, gave rise to the name of *angeiolencitis*. Our countryman, Dr. Hosack, presuming it depended on inflammation of the veins of the thigh, called it *cruritis*. Dr. Davis, of London, entertaining much the same opinion, bestowed on it the appellation of *phlebitis*. And Dr. Churchill, a late English author of much eminence, is rather inclined to adopt the opinion of Dr. Davis, and retain the new name of phlebitis. He admits, however, that " at the same time it is not impossible that some further information may be necessary before we fully comprehend the true theory of the disease." Therefore, it is quite possible for the new name of phlebitis to pass away, and give place to one more significant of its true pathology, so that after all, Dr. Hull's cognomen of phlegmasia dolens, as expressive of a matter of fact, cannot really and substantially be bettered.

Although phlegmasia dolens is generally considered a disease peculiar to females and to the puerperal state, yet this seems to be quite an error, for according to Drs. Hosack, Andral and others, it does sometimes occur even in the male, and in women who have never been pregnant. Nor is the disease always confined to the lower extremities, for in addition to what others have witnessed, I must be permitted to say I have had a severe case that invaded first the left leg, then the right, and then the right arm, and then the left in rapid succession.

I shall not enumerate the symptoms of phlegmasia dolens, but I shall make a few passing remarks on such as are omitted or perverted in their order by the peculiar views of authors who have written with an eye singly to a favorite theory. For instance, those who advocate the doctrine that phlegmasia dolens consists of an inflammation of the veins within and in the immediate neighborhood of the pelvis, tell us that the premonitory symptoms commence with pain or uneasiness in the lower part of the abdomen. They then go on, of course, and speak of the pain in the groin, down the thigh, and according as they conceive the disease to pass down the crural vein. Dr. Burns, however, who wrote generally from what he witnessed, says " sometimes there is no uneasiness in the belly, and the *first symptom* is a sudden pain in the calf of the leg. Within twenty-four hours after the pain is felt, the limb swells and becomes tense."

The same manner of invasion is mentioned by Dr. Hosack, who tells us the pain commences, not in the groin or pelvis, but in the calf of the leg, and is common to every part of the limb affected. And he further expresses his opinion, " that the disease has occurred where there has been no more morbid action of the uterus than there has been of the mammæ."

Dr. Churchill, who is rather inclined to the phlebitis theory, has the candor to say " sometimes there are no precursory symptoms (meaning about the abdomen), the patient being *suddenly* seized with a pain in the calf of the leg. When the disease commences in this manner the swelling is first there or at the ancles, gradually extending up the calf of the leg and thigh."

Dr. Colombat, whose elaborate work is just republished in this country, says, " the disease comes on with a chill and a sudden pain in the groin and thigh, and swells from above downwards." But his able editor, Dr. Meigs, says plumply, " I shall interrupt the paragraph to protest against M. Colombat's account of the onset of the disorder, or rather to aver that in the many cases I have met with, the swelling is, in a great majority, first in the calf of the leg, which becomes painful, hard, and swollen, before the woman suspects she has any pain in the groin or in the thigh."

I have been thus particular in bringing forward proof that the pain and swelling very generally commence in the calf of the leg, for pathological purposes to be noticed hereafter.

Dr. Burns mentions what, as far as I know of, no other writer notices, "That sometimes the disease begins like rheumatism, affecting the back and hip joint. Then" (he does not say how long after) "the upper part of the thigh becomes painful and swelled." And in another paragraph, he says "The temperature is below the natural standard." He also notices a general restlessness or moroseness or morbidly irritable state of the female, as premonitory of an attack of phlegmasia dolens.

Although Dr. Lee mentions among the premonitory symptoms "*rigors*," as he should do to make phlegmasia dolens a true phlebitis, and Dr. Burns says "The temperature is sometimes below the natural standard;" still it is a fact, that the invasion of unequivocal phlegmasia dolens differs from that of all true important phlogoses in general; for as far as I have witnessed, or can learn, the disease is itself never ushered in with general rigors. Dr. Good, who was a careful observer and seldom erred in judgment, observes, "That within a few days after delivery according to the common course of the disease, the patient complains of pain in the groin of one side accompanied with the general train of pyrectic symptoms, *but without the precursive shiverings*," all going to prove that it differs essentially from all true phlegmasia.

Remote Causes.—As for the nature of the causes, whether predisposing or exciting, very little is known. We simply know that gestation more than parturition predisposes to it. Dr. Good observes—"A minuter examination and attention to the subject have sufficiently shown that this complaint has seldom any connection with the milk; perhaps never. It has occurred where the breasts have been destitute of milk, and where they have overflowed; where suckling has been relinquished, and where it has been continued. It is not long since that I was consulted by a young woman laboring under it who was suckling her infant without any complaint of her breasts whatever."

"It is as little influenced," continues he, "by the state of the lochia as by that of the milk. It attacks women of all ranks and of all habits, the healthy and the diseased; the lean and the corpulent; the sedentary and the active; the young and the middle aged. It also occurs in all seasons and in all situations. And I may safely add, that no degree nor known manner of labor predisposes to it; so that all that can be said on the subject of its predisposition is that gestation, or a state of the system similar to it, both general and local, predisposes to its development."

With regard to the exciting cause, the only one set down as such by writers is cold, or suppressed perspiration. But this, I am well aware, is purely conjectural.

Pathology.—On the pathology of few diseases have writers differed more widely than on that of Phlegmasia Dolens.

In reviewing its pathology I shall not go back any further than 1784, when Mr. White of Manchester wrote on this disease, and maintained that it depended on an obstruction or some other morbid condition of the lymphatics and their glands of the affected side.

In 1792, a Mr. Tyre came out with his theory which imputed the whole disease to a rupture of the lymphatics as they cross the brim of the pelvis under Poupart's ligament, giving rise to all the manifestations of the disease.

In 1800, Dr. Hull appeared in his treatise on this disease, and contended that it was an inflammatory condition of all the textures, muscles, cellular membrane, lymphatics, nerves, glands and blood vessels of the affected part, giving rise to an effusion of serum and coagulable lymph. Hence he named the disease Phlegmasia Dolens, a name it has generally borne ever since, and one which I am quite confident it will continue to bear to the end of time.

As early as 1812, our distinguished countryman Dr. Hosack, taught in his lectures, as I well remember, the disease was a real inflammation of the veins of the thigh and leg, and bestowed on it the name of *Cruritis*—and precisely the same doctrine is now advocated by Professor Watson of London, a most eminent pathologist and teacher of medicine. He says unequivocally, that "the essence of this disease is inflammation of the femoral vein, which blocks up that vessel near the groin, and retards or precludes the return of the venous blood from the limb." From his subsequent remarks it is evident that he confounds phlegmasia dolens with œdema, from all mechanical causes, as strange as it may seem.

In 1817, Dr. Davis of London brought out his new theory, although Dr. Hosack was in fact several years in advance of him, making phlegmasia dolens to consist of a veritable inflammation of the veins within the pelvis and down the leg; and hence he denominated the disease Phlebitis, which cognomen is still adopted and maintained by many recent authors.

Whoever wishes to see an able refutation of the doctrine that phlegmasia dolens proper is a true phlebitis, and all antecedent theories, will find it well served up by Dr. Davis in his work on diseases of females. He contends strongly, however, that phlegmasia dolens is a real phlogosis or acute inflammation; but he seems rather doubtful as to its location. He is inclined, however, to the opinion, "that it occupies exclusively the white lymphatic vessels of the cellular membrane of the several textures of the limb."

I cannot pass unnoticed the pathology of Dr. Good, inasmuch as he was an accurate observer of nature, and a most profound investigator.

He says: "There is yet another mode of accounting for this inflammatory affection of the lymphatics of the lower limb, and which, upon the whole, I cannot but think is its real source. It is that of supposing an habitual debility of the lymphatics affected, and inflammation produced in them, which Mr. Hunter calls, though with some looseness of expression, the stimulus of relaxation; or, in other words, from the weakly lymphatics, now destitute of surrounding pressure and stimulus which they possessed during pregnancy, yielding too easily to the flow of the fluid they have to convey; and on this account becoming morbidly distended and inflamed in consequence of such distension."

M. Colombat, in his learned work, speaks distinctly of uterine phlebitis, pelvic and crural phlebitis, neuritis, and of angeioleucitis, or inflammation of the lymphatics as separate diseases; whilst most writers, and even his annotator, confound them under one head, that of phlebitis. It is this indiscrimination, in my humble opinion, which has given rise to such dissimilar pathological views and modes of treatment.

M. Colombat does not give any decided opinion of the pathology of phlegmasia dolens; but he says that "uterine phlebitis, and phlebitis of the veins of the pelvis, inflammation of the sciatic and obturator nerves, and inflammation of the lymphatics of the limb, may contribute to produce the phenomena that constitute the malady;" that is, these conditions may act as secondary causes, influencing materially the phenomena of the disease when they are coincident.

As these conditions are sometimes coexistent, it is not surprising that they should be confounded together under the head of phlegmasia dolens.

In reference to the foregoing brief review of opinions, it is not a little surprising to mark how authors frequently torture symptoms to make them bear upon their favorite theories; thus those who advocate the doctrine of the identity of phlebitis and phlegmasia dolens tell us, as Dr. Davis does, that the disease is ushered in with *rigors*, when we know true phlegmasia dolens never is; that the pain commences in the groin, whilst Dr. Burns, as already noticed, and many other accurate observers, say, the pain and swelling is sometimes from the groin downwards, *but in most cases* they are first perceptible about the calf of the leg, and proceed upwards,—which is fatal to Dr. Davis's theory.

Some of these theorists pretend to feel the veins like cords; others feel the knotty lymphatics, swelled and inflamed; when we all know, who have attended a case, that the limb is as uniform and smooth as polished marble until the swelling is on the decline, when some portions of the indurations remain in patches longer than others, giving the limb an uneven feel, until all the tumefaction is softened down to a serous œdema. Even the candid Dr. Denman believed that the pain in the leg ascended, "following the course of the lymphatics," as it should do to support his theory of lymphatic inflammation.

But the most unaccountable circumstance attending the advocates of Dr. Davis's theory is, that they should confound genuine phlebitis with phlegmasia dolens, when they are in every respect so dissimilar, especially in their course and termination. True phlebitis, like all other important phlegmasiæ, is ushered in with general rigors. It soon becomes highly inflammatory, typhoid symptoms are quickly developed with grossly-depraved secretions, and all the characteristics of putridity, proceeding from a contaminated state of the fluids; and death very generally and very quickly closes up the scene.

M. Colombat, in treating of phlebitis apart from phlegmasia dolens, says, "Of all the diseases which occur after labor, uterine phlebitis is certainly one of the most frequent, and most fatal."

Phlegmasia dolens, on the contrary, begins *always* with pain of a most violent neuralgic character; the fever, though seeming acute, is never highly inflammatory, so that Dr. Good calls it a hectic; the phenomena are never typhoid, there are no manifestations of a depraved state of the secretions, unless cleanliness has been grossly neglected, and I hazard very little in saying that uncomplicated phlegmasia dolens is never fatal.

As for the cases and post-mortem appearances furnished us in support of the phlebitic character of the phlegmasia dolens, if we may be allowed to judge from the symptoms, not one of them ever published was entitled to the appellation of phlegmasia dolens ; and some of them had not even the semblance of this disease. They were mostly cases of true phlebitis grouped with phlegmasia dolens to support a favorite theory.

The opinions of the most eminent French practitioners of the present time on the subject under consideration seem to have been drawn out at a meeting of the Royal Academy, at a late sitting. The theory that phlegmasia dolens was a simple crural phlebitis was advocated only by M. Capuron, although M. Andral was inclined to believe uterine phlebitis, or some pelvic derangement, was at the bottom of the disease, both in the female and in the male subject.

The celebrated Velpeau acknowledged that twenty years ago he was, with Dr. Davis, of England, an advocate for the doctrine of crural phlebitis as the foundation of phlegmasia dolens ; but he had changed his mind, and had concluded that it was a true angioleucitis, or inflammation of the lymphatics, involving the other tissues consecutively.

The last, and by far the most plausible theory was broached by M. Cloquet. His words are : " By having carefully watched the progress of many cases from their first stages, I have been enabled to form clearer and more accurate notions, I think, on the subject under consideration. The result of my observations is, that as a general remark, the cellular tissue is the seat of the œdematous swelling ; that an inflammatory engorgement, accompanied with effusion, takes place at first, and it is only consecutively that either the lymphatic vessels or veins become affected. My opinion is, we may regard phlegmasia alba dolens as a specific inflammation of the cellular tissue, either with or without accompanying inflammation of either the lymphatics or veins of the part."

M. Moreau took the same view of the nature of the disease. In his opinion, it is a specific disease which should not be confounded with an inflammation either of the absorbents or veins. " Phlebitis," continues he, " is always a serious, and often a most dangerous disease. Phlegmasia dolens, when unaccompanied with other lesions, is comparatively mild and innocuous. I should define the disease, in its primary stage, to be a true exhalent inflammation of the cellular tissue." So much for authors !

I shall now take the liberty to offer a few remarks both on the pathology and on the treatment of the disease under consideration; with such strictures on the opinions of authors as may suggest themselves.

Phlegmasia dolens is clearly divisible into three distinct stages, requiring three distinct and widely different modes of treatment. These I shall denominate—1st, The *forming, or neuralgic ;* 2d, the *albuminous ;* and 3rd, the *serous stage.*

The first,—the forming, or neuralgic stage, commences at the invasion of the disease, and continues till the violence of the pain has greatly subsided, or nearly ceased, when the limb is at rest, and the swelling has reached its acme, or nearly so. This stage varies in duration, occupying from twelve to forty-eight hours.

The second, or albuminous stage, commences with the subsidence of the neuralgic pains and the acme of the intumescence, and continues till the soreness and pain on moving the limb are gone, and the swelling pits on pressure. This stage lasts from five days to as many weeks.

The third, or serous stage, commences with the absence of soreness and pain on motion, and continues till health is restored. This stage occupies any length of time the physician sees fit to give it.

The continuance of these stages depends entirely on the treatment adopted. The opinion that little can be done to accelerate the cure is groundless, and is the result of ignorance, for no disease is more readily influenced by remedial means than this at any period.

I shall now proceed to consider the pathology of these stages separately, and the modes of treatment indicated and adapted to each, as we proceed.

First,—The forming, or neuralgic stage. It is a fact, that nearly all important diseases have a forming stage, when they are confined mostly to the nervous system. This forming stage is the first link in the chain of causation, and very often gives character to and materially influences the whole disease.

This circumstance, it seems to me, has not received the amount of consideration it demands. For instance, in describing an intermittent or a remittent fever, writers at once detail the symptoms of a regular paroxysm, when the fact is, it is several days after the invasion before a regular paroxysm is formed. Again: take acute rheumatism, as nearest resembling phlegmasia dolens, and the same defect is observable. Select Marshall Hall, for instance, as a standard work, and we find nothing previous to a description of the confirmed disease. Turn, however, from Hall to our own Dewees, and we find the beginning told. He says: "The disease, like other phlegmasia, is usually ushered in with a sensation of cold, and sometimes by a chill of some continuance; we once knew it to continue for more than an hour, and was supposed to be the forerunner of an intermittent. At other times, slight and repeated shiverings mark its commencement. The heat which succeeds the coldness does not always extend over the whole body. We have known it to be confined to the upper portions of the body, or such as were nearest the source of the circulation, while the feet and legs have remained cold, though portions of these parts afterwards became the seats of the affection." He goes on still further in describing this truly forming or nervous stage. As in rheumatism so in phlegmasia dolens, there is always a distinctly forming stage when the disease is confined at first to the nervous system, involving the other textures consecutively.

This stage of the disease presents all the manifestations of a true and general neuralgia, with a local determination to the nervous fibrillæ of the predisposed part; as Dr. Hosack observes, "not merely affecting the limb, but the whole system." Hence the attack frequently resembles that of inflammatory rheumatism, as Dr. Burns says, "being marked by violent pain in the back and hips, with a sense of universal agony, *followed* by a violent pain in some part of the limb *before* any swelling is evident," even when the limb about to be affected is cool.

Dr. Denman says: "Before the appearance of any swelling or sense of pain in the part about to be affected, women become very irritable, with a sense of great weakness, and grievously depressed in their spirits, without any apparently sufficient reason. After a short time," continues he, "they are seized with an acute pain in the calf of the leg, extending to the inside of the heel." Added to these unequivocal nervous manifestations, is the coolness which Burns speaks of, though never amounting to rigors.

In short, whoever has witnessed for himself cases of phlegmasia dolens, and carefully observed the invasion, must have noticed the phenomena of general and local nervous irritation which always characterize the attack.

As in many other local determinations, so in this, the irritation of the whole system seems to concentrate in the part, rallying there, and increasing in intensity, till at length it becomes almost intolerable; swelling commences, and the pain and intumescence go on augmenting, till the latter reaches its acme, or nearly so, and then the pain subsides, leaving a most exquisite soreness or sensitiveness in the limb, which is painful now only when it is moved.

The pain in the calf of the leg and heel, before there is any heat or swelling, go far to establish its neuralgic character, and to prove that such cases are independent of any obstruction about the pelvis, and if one case can be developed independent of any such obstruction, any number can.

I would here ask, Whence proceeds this violent pain? Certainly not from the tumefaction of the part, for it precedes this, and abates as soon as it is accomplished. Besides, the simple swelling of anasarca, however enormous, produces no pain.

In support of the neuralgic character of this stage of phlegmasia dolens, besides the violent pain, I would adduce a circumstance noticed by Mr. White, "who," says Dr. Thomas, "looks on the swelling of the labium pudendi as an invariable symptom of the disease;" and he asserts that "when one limb only is affected, the intumescence is confined so exactly to the labium pudendi of that side, that if a line were drawn from the navel to the anus, it would be found never to go beyond that line in the smallest degree."

From all the phenomena and circumstances of this stage of phlegmasia dolens taken together, I am led to conclude that it is primarily and essentially a pure neuralgia, or functional derangement of the nervous system concentrated in the affected part, producing that peculiar capillary action, or *specific inflammation* so called, of the cellular tissue of the limb, already noticed, and terminating in effusion—not of ordinary watery serum—but of albumen, closing the first stage.

We know the intimate connection of every part of the nervous system, and the influence it exerts over the secretions and capillary circulation. Now, in a neuralgia so extensive and severe as the one under consideration, we should expect the whole nervous system would suffer material derangement, producing suspension of all the secretions and capillary aberrations, diminishing the flow of milk, and giving rise to that peculiar vascular action of, and effusion in, the cellular tissue, already alluded to, and to the acute sensitiveness of the nervous fibrillæ, in their minutest ramifications, throughout the part affected.

Treatment of the First Stage.—The foregoing view of the pathology of phlegmasia dolens first suggested the course of treatment I have adopted and pursued with uniform success, which is the best proof of the correctness of the doctrine.

The indication in this stage of the disease is to tranquillize or allay all nervous irritation at once, and thus to arrest the disease by breaking up the first link in the chain of morbid catenation.

This is to be accomplished by a full anodyne. For this purpose, I administer from four to eight grains of opium, with as much gum camphor, and repeat the dose, if necessary, every two hours, till all pain ceases. In the course of thirty-three years' practice, I have prescribed this to as many as six cases, and always with complete success. I have generally given the anodyne at bed-time, in full dose, and have found every symptom, except a little stiffness, dissipated on the next morning. I accompany the opiate with some warm vegetable infusion. A copious perspiration is induced, and thus the disease terminates in a few hours. A laxative, with a due degree of caution against cold, is all that is necessary to guard against a relapse.

Second, or Albuminous stage.—The next stage of phlegmasia dolens I have denominated the *albuminous*, from the circumstance that the affected limb is filled, and, if the disease has not been arrested, is enormously distended by what I conceive to be *albumen.* The intumescence is of a pearly whiteness, uniformly smooth, tense and elastic; very sore and painful when flexed, but it is not painful when at rest. It will not pit, for it is filled with a gelatinous fluid, with what I conceive to be albumen, nearly pure.

Every practitioner must have observed albumen secreted by the skin from the action of cantharides. When vesication commences the fluid is serous, and readily runs off when the cuticle is broken. Soon, however, the fluid becomes so albuminous that it will not run off, though the cuticle be removed in large patches. After a few hours, a more serous or watery fluid is poured out from the skin beneath, which dilutes the albumen, and it runs off.

So it is in phlegmasia dolens. When the swelling is punctured no fluid escapes, but from an incision some may be pressed out, and then the wounded part presents the transparent glistening appearance of the white of eggs.

Dr. Thomas says the fluid does not coagulate, nor does the white of eggs at a temperature below 140° of Fahrenheit; hence it never coagulates in the limb, for "it never coagulates spontaneously," says Müller.

The process of morbid secretion, or exudation by inflammatory or exalted action, I conceive to be tending in order something like this. A low degree of increased action tends to the effusion of an *aqueous* fluid; the action rising, next pours out *serum*, containing albumen in solution; then *pure albumen;* then coagulable lymph, or fibrin; and lastly, pus; all modified, however, by the nature of the tissue affected. But Müller says: "A higher degree of inflammation may give rise, *in any membrane*, to the exudation of *fibrin*; and in a further stage of the inflammatory process pus only is formed."

Now these facts are, in a great measure, applicable to the intumescence of phlegmasia dolens. When the swelling commences at the very onset it pits because it is serous. Soon, however, it does not, for it has become too albuminous, or jelly-like; and, in ordinary cases, continues so till the disease is changed. When, however, the affection continues to increase in intensity by maltreatment or otherwise, coagulable lymph is poured out, or pus is formed; hence sometimes the limb remains permanently enlarged, or suppuration ensues.

That the distending substance in the tumefaction under consideration is albumen, is rendered more than probable by the following views taken from Müller:—Fibrin coagulates as soon as it is at rest, and then it takes on a strong disposition to become organized, or to form adhesions and become unalterably fixed, so that all ordinary or curable cases cannot consist of fibrin, although some severe ones unquestionably do.

Albumen exists "in the fluid of the cellular tissue." It composes the chief part of the serum of the blood, in which it is held in a state of solution by an alkali, probably soda. When it thickens, coagulates, or dries at a temperature below 140° of Fahrenheit, it is soluble even in cold water, so that a watery exhalation into an albuminous collection would soon soften it.

Albumen coagulates under the influence of galvanism.

This albuminous stage is deemed by most writers as one of active inflammation. Dr. Dewees says: "Be the affection seated in what tissue it may, its character is highly inflammatory."

Before settling the question whether it be an inflammation or not, it is necessary to attach some definite idea to the term *inflammation*.

We know that in its definition redness is always included as necessary to inflammation. I shall take the opinion of Müller on the subject as the standard authority of the present day. His words are: "The minute vessels of an inflamed organ contain, at every stage of the process, an increased quantity of blood. At the commencement of the inflammation the blood flows into the capillaries in larger quantities than natural, circulates through them rapidly, and escapes from them into the veins with great difficulty; but, in a more advanced stage of the disease, the circulation becomes impeded and stagnates in the distended capillaries; at first, single vessels only, but at last all the capillaries of the part are seen filled with blood which is motionless." So that, if increased quantity of blood in the capillaries of a part is to be regarded as a *sine quâ non* to inflammation, then phlegmasia dolens cannot be considered as such, for the affected part is almost bloodless, containing far less, instead of more, blood than natural.

The heat, soreness and general vascular action, are most unquestionably owing to the erethism, excitement, and exalted sensibility of the nervous system generally, and more especially of the nervous fibrillæ of the part.

Every practitioner must have witnessed fever in irritable females, attended with thirst and a white furred tongue, solely from morbidly-increased sensibility. This condition obtains in a still higher degree in phlegmasia dolens, especially locally. The nervous erethism of the affected part influences the capillaries of the cellular tissue, specifically and morbidly, causing them to pour out serum containing an unusual quantity of albumen. This, partially coagulating in the cells, gives the part its uniform elastic feel.

The question here arises, Why does the albumen of the serum coagulate in phlegmasia dolens and not in other cases of serous effusions? I would reply, that if galvanism and the nervous fluid are not identical, they are nearly allied in their effects; so that any material disturbance or extraordinary derangement of action in the nervous fibrillæ of the diseased part, as is the case in phlegmasia dolens, must affect its galvanic state, and probably in such a manner as to cause the albumen of the effused serum to coagulate in the cells, thus making the coagulation of the albumen the effect of galvanism, as, under other circumstances, we know it to be.

Treatment of the Second, or Albuminous stage.—It is against this condition that practitioners direct nearly all their medical artillery. Dr. Dewees and many others bleed freely, both generally and locally, to subdue the inflammation; but most practitioners are satisfied with leeching, fomentations, poultices and laxatives.

Some recommend blisters even warmly, whilst Dr. Dewees and some others condemn them as injurious. For my part, I cannot conceive how any one ever thought of applying them, for I am at a loss to conjecture how they could possibly do any good, or fail of doing much injury.

When called to a case of phlegmasia dolens in time, I have never had one to proceed to much if any tumefaction or soreness. Sometimes, however, the sick and her family exhaust all their skill in domestic remedies before they apply for medical aid, and in such cases the albuminous stage is fully confirmed. For the removal of this, my indication is to change the albuminous into a serous state. This can be soon and safely accomplished by emetics alone. No class of medicines so soon and so effectually reduce nervous erethism, break up morbid associations, and consequent disordered movement of the capillary system, and set them right, as emetics. These considerations first induced me to resort to them in this stage of phlegmasia dolens, and I must be permitted to say I have uniformly found their operation to be decidedly and strikingly beneficial.

I always prefer the tart. of antim. as far more decisive in its action on the nervous and especially on the capillary systems. Many articles will provoke emesis, but none will produce the specific effect of tart. of antim. et pot. Often one emetic alone will change the character of the tumefaction in twenty-four hours, freeing it from soreness and causing the swelling to pit freely and deeply, being purely serous. When one emetic fails, a second may be given, or even a third, at intervals of twenty-four hours. I do not hesitate to say, that three emetics at most, and very often one alone, will change any acutely sensitive and swelled phlegmasia dolens into a passive serous state, in as many days.

Hufeland is the only author, as far as known, who recommends emetics at all in this disease. He says, "In some cases emetics repeated for a few days are an efficacious remedy." But he does not tell us how we are to distinguish these "some cases." Even the old veteran Hufeland seems to have been influenced in his mode of treatment by his notions of its inflammatory nature.

Cathartics are of no avail in any stage of this disease, any more than to keep the bowels regular.

In conjunction with emetics the most advantageous local applications are soothing fomentations of hops or poppy heads, especially the latter, applied warm. Over these a flannel should be placed to retain the warmth and moisture.

All kinds of stimulating liniments and embrocations are injurious, as is every degree of friction during this period. As soon as this course has succeeded in procuring a freedom from soreness, and a doughy pitting feel, with coolness of the limb, the third or serous stage is fully established.

The Third or Serous Stage.—The phrase *serous* is perhaps too indefinite for scientific purposes, unless it be used generically. The serum of the blood contains very little water, but consists chiefly of albumen in solution and in combination with other animal matters; whilst the serum of dropsies is mostly water, and is more properly called *serosity*. But inasmuch as Professor Watson, who is good authority, uses the words *serous* and *watery* synonymously, I shall follow his course.

This third or serous stage of phlegmasia dolens consists almost entirely of a distension of the cellular tissue by a serous or watery fluid, except in those truly inflammatory cases which pour out fibrin, and these may be set down as about incurable.

Treatment of the Third or Serous Stage.—No time should now be lost, but at once the case should be treated as one of uncomplicated anasarca. Our main dependence, in this state, is on the roller or bandage. Either a muslin or a soft fine flannel one, well adapted, must extend from the toe to the hip. At first it should be applied moderately firm, but it may be drawn with more force daily. The bandage should be removed every twenty-four hours, and the whole limb should be rubbed with brandy, saturated with common salt, or with any stimulating liniment. Frictions with the hand or flesh-brush may now be resorted to with advantage, to give tone to the relaxed vessels. It is in this stage that diuretics as well as tonics are indicated; here calomel and squills, as first recommended by Dr. Samuel Bard of New York, and subsequently by Dr. Hosack, will be found a good prescription, although perhaps no better than many other diuretics. Tonics and a generous diet are now called for, and the diuretic must be of a tonic nature, consequently the digitalis will not be admissible. The bitter alkaline infusion will be especially useful. Amongst other things I would recommend especially an infusion of the plant Pyrola Umbellata, called Pipsisseway, or Prince's Pine. Another excellent tonic and diuretic is the Apocynum cannabinum, or our Indian hemp. It has cured many cases of dropsy after all other things had failed.

Appendix.—Up to the time the above was written I had no notes of cases in detail, for I never calculated to publish anything on the subject; but since then, the following cases have fallen under my care.

Case I.—Mrs. D., aged 39; of a full habit, but of a nervo-sanguineous temperament, has for many years been affected with severe fits of palpitation of the heart; her nervous system extremely sensitive. She was confined of her first child on July 3rd, 1845; her lower extremities were very œdematous. Her labor was mild, and occupied only about twelve or fifteen hours. Her bowels were regularly moved by an infusion of epsom salts, senna and aniseed, and all things went on well till July 8th. She was then seized with a moderate pain in the morning, on the right side of the lumbar vertebræ, in the groin and in the ankle simultaneously. The pain remained tolerable till the 12th when it became quite severe in the whole limb, which had now commenced swelling, and became somewhat tender and stiffened. I was now called in, and found her as described. I examined every part carefully, and found that pressure on the side of the spine over the origin of the lumbar nerves aggravated the pain in the whole leg, but more especially that in the groin near the origin of the adductor longus. At this point and over the right labium pudendi the pain and soreness were the most striking, and pressure on these parts aggravated the pain in the back and vice versâ. She had been for two or three days inclined to be chilly, but had had nothing like rigors at any time. Pulse full and about 95. Skin dry; tongue a little white; secretion of milk suspended, but the lochia not; some thirst; appetite gone; is restless and suffers considerably but not intensely. As the bowels had been neglected for two days I left three powders of cal. 4 grs., and ip. 1 do., one to be administered every two hours; and two hours after the last two teaspoonfuls of epsom salts, commencing at 6 A.M.

Called again at 9 P. M.—Medicine had nauseated but had not vomited her; had moved her bowels six times; skin more soft, in all other respects about the same as in the morning. I then left two powders of cal. and op. āā 3 grs, one to be given at 8 and the other at 10, if the pain be not wholly relieved, and to drink freely of warm mint tea.

July 13th called at 7 A.M.—Found she had taken both powders; had perspired freely, and slept all night, and was then in a profuse perspiration. Pains and soreness all gone except a trifle only in the back, when she moved the leg. Ordered her to be kept perspiring by warm diluents till 12, then to take a dose of salts, senna and aniseed mixed. At evening the medicine had operated, and I found her comfortable. Dismissed.

July 16th, called on to visit her again.—Found she had sent for me on account of the pain of her back when she undertook to walk: but was in all other respects well. I applied a blister over the lumbar region close to the right of the spine, which put an end to all further trouble.

I must here be permitted to observe, that this was a fair, though mild case of phlegmasia dolens, presenting the peculiarity alluded to by Dr. Thomas, that of affecting exactly one half of the vulva; for I was very particular to examine for myself. Another peculiarity of the case was its connection with, or dependence on, the spine or spinal nerves at their origin, and I must here add that it is quite possible for phlegmasia dolens to be always thus connected, inasmuch as the pain at the origin of the nerve in other cases where such a state really exists, is very generally unnoticed, while that in the parts to which the nerve is distributed is very severe, absorbing the whole attention.

Case II.—Mrs. K. aged 23; of choleric temperament, spare habit, of delicate health, of very irritable nerve, and subject to spasmodic attacks, was confined of her first child, July 6th, 1845, after a mild labor not exceeding eighteen hours; subsequently comfortable, took a laxative on the 8th which operated mildly.

July 10th.—Began to feel a slight pain in the right groin, calf of the leg, and heel, simultaneously, but did not name it to me till the 12th, when it became rather troublesome, but it claimed no particular attention until the 14th, although her bowels had been kept free.

July 13th, at 8 A.M.—Pain suddenly increased in the whole leg, pulse unaffected, appetite unimpaired, skin natural, pulse 80, tongue clean, secretion of milk suspended, lochia not. Ordered a laxative mixture of senna, &c., with free use of warm vegetable infusions. At 10 evening, laxative had operated freely; pains all increased, leg stiff and begins to feel sore. Administered a powder of gum opii 3 grs., gum camph. 6 do., to be followed by a copious draught of warm hyssop tea.

July 14th.—At three in the morning sent for in haste: the patient said to be dying. Found her vomiting, fainting and wild from the opium, with ice-cold extremities; slow creeping pulse, in short, in a frightful predicament, having slept none at all. In this alarming state she remained nine hours, but by the faithful employment of frictions, warmth, &c., and the use of a stimulating enema of ginger, she came out of this fearful turmoil and became calm and comfortable. Her father then told me that neither her mother nor grandmother could take opium without similar consequences.

July 15th.—Free from pain; the whole limb sore and stiff; all of which disappeared in about forty-eight hours.

July 16th, 17th, 18th, and 19th.—Improved and commenced sitting up.

July 20th.—Felt slight pains all day in different parts of the left leg, from the groin to the heel; fears the disease is about to make another attack; took a laxative and kept warm in bed.

July 21st. Bowels free, pain much worse, quite severe, especially in the groin, underside of the thigh, calf of the leg and heel; pulse 95, skin dry, tongue clean, no thirst, lowest lumbar vertebra very sensitive. Fearing her bad impressibility to opium, I deferred its use: gave her emetic of tart. emet. 2 grs., ipecac. 10 grs. at one draught, at 10 P.M. Its effects were not much better than that of the opium. Every precaution was taken to facilitate its operation by warm potations, yet spasms supervened. It operated freely, producing for a few hours a respite of the pain in her leg, &c.

July 22nd. At 10 A.M.—Pain which had been off, since the violent emesis, on the evening previous, returned with great violence and with all its former concomitants. On examining her spine I found the two lower vertebræ very sensitive.

Compelled to abandon my old ground, I concluded to make a new assault. I ventured on a dose of gum opii 1 1-2 grs., gum camph. 10 grs. and calomel 8 grs.; and applied a blister 4 by 6 inches close on the side of the diseased vertebra, so as to cover the origin of the nerves of the affected side at their roots.

July 23d, 8 A.M.—No relief, blister drew well, pain intensely severe, the whole leg hot, dry and tumefying; pulse 100, milk and lochia suspended; gave a draught of the senna mixt., and ordered the whole leg to be enveloped in hot flannels wrung out of a strong decoction of hops, and continued all day. 8 o'clock P.M., found her quiet and free from all pain. It left her suddenly at 3 o'clock, limb a little swelled and very sore, otherwise comfortable; the secretion of urine being suppressed, I gave her tinct. opii 40 drops, spts. nit. dulc. a teaspoonful, and ordered the spts. of nit. to be repeated every three hours all night. Pulse 95, skin soft, tongue yet clean.

July 24th.—Had slept well and perspired all night, pulse 90, comfortable. I then made a complete and careful examination of the soreness which, with a slight tumefaction, continues: found it difficult moving the leg from its great tenderness; soreness was exquisite from the crest of the ileum downwards, before and behind; down the groin and over the exact half of the pubic regions; on the inside, underside and outside of the thigh, and on the upper broad front of the same, under the knee, down the calf and sides of the leg and heel. At all these points the soreness was very acute on pressure or motion, but the top and sides of the knee four inches below and six inches above were perfectly well, the sound part terminating in an acute point up the thigh and down the tibia; she pointed it out by passing her finger along its margin; took the senna mix. this morning and spt. nit. all the evening with mucilaginous drinks.

July 25th.—Soreness diminishing hourly, and the healthy space extending in proportion. Continued the laxative and subsequently the spts. nit.; milk and lochia returned.

July 26th.—Did not see her in the morning. Omitted the laxative. 8 o'clock, P.M., Soreness was worse with considerable old fashioned pain; increased heat and quickened pulse; gave her at once finely pulverized colch. root 8 grs., calomel 2 grs., followed by a draught of nitras. potass. ʒss. in a cup of elm tea, the same course to be repeated every two hours.

July 27th, 6 A.M.—Had taken four of the above colch. powders and five of the nit. potass. Had slept well, perspired freely, and was once more comfortable. Ordered the senna mixt. and spts. nit. as heretofore. 7 P.M. Laxative had operated rather freely, pain still absent, soreness steadily diminishing. Bowels being rather free, gave tinc. opii 12 drops, and spts. nit. dulc. a teaspoonful in warm mint infusion at a draught.

July 28th.—Had a comfortable night, pulse 80, skin moist, soreness gone, except a strip down the groin, and a trifle just about the hip joints; bowels moved once this morning.

July 29th.—Convalescing steadily. Discontinued attendance.

A case of this kind lately came under my care. A delicate female who has suffered a most excruciating pain in one heel, unaccompanied by soreness on pressure, or any other symptoms of inflammation, which had continued for six months under every kind of topical treatment. On examination I found a great tenderness in two vertebræ, which had been wholly unnoticed. A cupping on each side of the lumbar vertebræ and a blister encircling them, removed the pain in the heel at once and perfectly.

Art. II.—*Case of Division of the Spinal Marrow.* By Eli Hurd, M.D., of Middleport, Niagara County, New York. (Communicated by Jas. Webster, M.D., of Rochester.)

The following remarkable case of injury of the spinal marrow is believed to be without precedent, or at least to present sufficient points of interest to warrant its publication:

On the 24th of April, 1829, J. S. Spalding, of Hartland, N. Y., jumped from the top of a lumber wagon box on to a stick of timber lying upon the ground; and as his feet struck the timber, the surface being wet, they slipped instantly from under him, and he fell upon his back and left side. When he came to a rest, he found himself partly under the wagon, and between the wheels, the wagon and timber being parallel to each other. From this position he endeavored to extricate himself, but found his lower extremities benumbed and powerless. He then called out for assistance, saying that he had broken his back on the edge of the timber in his fall. He was immediately extricated from his perilous situation, and informed by his assistants that there was a chisel sticking in his back. This chisel, when he jumped from the wagon, was in his coat-pocket. An attempt was promptly made to extract the instrument, which resulted in pulling off the handle only.

I was then called, and in a few moments was on the spot, where I found my patient in the arms of three or four men, his back exposed, and an iron tool, which proved to be a part of the shank of a chisel, projecting from the skin. This I seized with a pair of blacksmith's pincers, such as are used for pulling off horse-shoes, and, bracing myself, endeavored to extract it, instead of which I pulled him out of the hands of those who had hold of him. We then braced ourselves once more, and, after a prolonged and severe effort, succeeded in drawing out a chisel, *five inches in length to the shoulder*, seven-eighths of an inch wide, and from a quarter of an inch at the shoulder tapering to less than one-eighth of an inch in thickness at the cutting extremity.

The wound was then dressed, and the patient carefully conveyed home. At the time of extracting the instrument, he says that he saw "vivid flashes of light, which were apparently followed by total darkness." During the operation he was conscious of very little pain.

The wound made by the chisel was opposite the spinous process of the lower dorsal vertebra, on the left side. At its superior extremity it was half an inch from the spinous process, and one inch at its inferior extremity; so that a line drawn parallel to the spinous processes of the vertebræ, and three-fourths of an inch to the left, would have intersected it in the middle. The direction of the instrument was upwards, at an angle from the surface of twenty to twenty-five degrees, and to the right of about twelve degrees, penetrating the spinal column, and undoubtedly entirely dividing the cord. Perfect insensibility of the skin below the wound, with paralysis of the lower extremities, bladder and rectum, was the immediate consequence. The shock that the system received produced great prostration for some forty hours, when reaction took place, and was followed by fever for ten or twelve days. The external wound cicatrized in a few days, scarcely discharging a spoonful of pus. The urine was drawn off by means of the catheter for six days after the accident, when the bladder began to resume its functions, and two days after the instrument was discontinued. Cathartics failing to move the bowels during the same period of time, and for two or three days longer, dejections were procured by stimulating enemata. Returning sensibility occurred in the skin the fifth day, and an imperfect use of the limbs about the fifteenth.

My attendance was twice and thrice daily for the first six days, once daily for the next eleven, then occasionally until the twenty-first after the accident (May 15), when the patient was dismissed from my charge. He first commenced locomotion on his hands and knees, then by pushing a chair round, and afterwards by means of crutches, which he has been obliged to use ever since. Distortion of the feet and ankles commenced some weeks after his efforts to get about on crutches, and increased for several years thereafter; yet his general health continued good.

The treatment during the state of prostration was by diffusible stimulants, through the febrile stage by antiphlogistics; while friction, with stimulating liniments to the paralyzed parts, was used throughout both stages, and for months afterwards.

[The following additional particulars, written subsequently and recently communicated, complete the history of this remarkable case.]

Sensibility of the skin and action in the inferior extremities returned very slowly; so much so, that four years and seven months after the accident above-mentioned, carelessly sitting or kneeling with his left knee nearer than usual to the hot fire, without feeling any pain, or being conscious of suffering, the skin and integuments over the knee-pan and on either side of it were so badly burned, that mortification and sloughing took place. This was so deep, that the cavity of the joint was opened and exposed to view. The patella was covered only by the periosteum, and after a few days, as he was endeavoring to draw his leg up in bed, broke transversely across. The superior portion of the patella protruded so much from the wound in consequence of the retraction of the extensor muscles, that, after various unsuccessful attempts to reduce and keep it in place, it was removed by amputation. The knee was now much inflamed and swollen. The wound gaped horribly, and every symptom gave indication of a fatal issue. A fungous vegetation sprang up from every side of the wound, filled up the cavity, and formed a spongy protuberant mass above and around it. Hemorrhage followed every application of caustic that was made to check its exuberant growth, as well as compression, even the slightest touch. The miserable patient became extremely exhausted, and amputation of the diseased and crippled limb seemed the only alternative, and even that a doubtful one.

At this juncture, December 23, 1833, which was more than three weeks from the time of the burn, and the seventh of my attendance, I commenced dressing the wound with "*Singleton's Golden Ointment*," according to the analysis of Mr. Thomas Clark, of Glasgow, Scotland.* This soon arrested the morbid action, reduced the size of the fungoid mass, and gave it a healthy appearance. Convalescence slowly followed. January 22, 1834, I introduced a seton in the sound parts above the wound, and on February 4th the patient was dismissed cured. He has since remained well. No anchylosis of the joint at the time occurred, nor has since taken place. On the contrary, he has complained of its being rather too flexible.

A large, ugly-looking puckered cicatrix remains over and above the left portion of the joint. The inferior portion of the patella is drawn round upon the outside of the knee-joint. The leg is rotated outwards, and the heel thrown in so as to point to the hollow of the right foot. The toes are thrown out and drawn up towards the metatarsal bones, and the whole foot is drawn inwards, and flexed upon the tibia in such a manner as to make almost a right angle with the leg. There is also considerable deformity of the right foot and ankle, though less than of the left.

The general treatment was by wine, tonics and opiates. The local unimportant otherwise than above-mentioned. He was under my care, in the treatment of the limb, for thirty-three days, and slowly thereafter recovered the use of his limb, except the previous decrepitude, which has considerably increased since.

Such is a brief account of this extraordinary case; embracing and detailing, however, all the important and material facts that transpired both with regard to disease and treatment, from the time of its first unfortunate occurrence till its final termination in health.

There is no curvature of the spine, nor has there been at any time. Nor is there any complaint whatever of the back. He can get into and out of a carriage, mount a horse from the ground without assistance, and ride off at any pace. He has been elected constable and collector of the town where he resides for a number of successive years, discharged the duties of his office acceptably to the public, and attends to many other kinds of business. He has married within two years, and has one child. In fact, he is, in every sense of the word, as *well* as he ever was, except his crippled condition.

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* See No. 12 of the Glasgow Journal, or Medico-Chirurgical Review. New Series. Vol. XIV.

[We regard the above case as unique, as far as our knowledge extends, and the facts are abundantly corroborated. That the spinal marrow was completely divided, and afterwards united, there seems to be no doubt whatever. Perhaps it may be deemed not more remarkable than the union of nerves after division for tic dolouroux, a fact well authenticated, as the spinal cord may be considered no more than a bundle of nerves contained within a common sheath. Cases also are recorded where incised wounds of the brain have united, and the patient recovered; but, so far as we are informed, this is the first instance on record of a total division of the spinal cord.—ED. N. Y. JOUR. MED.]

ART. III.—*Extracts from an Official Report of* J. J. B. WRIGHT, M.D., *Surgeon U. S. Army, to the Surgeon-General U. S. Army, on the Use of Large Doses of Sulphate of Quinine in Diseases of the South.* (Communicated by W. H. VAN BUREN, M.D., U. S. A.)

* * * PREVIOUS to April, 1841, I had never exhibited quinine in larger quantity than twenty-five grains, in twelve consecutive hours. I have a distinct recollection of the circumstances under which, with a trembling hand, and doubting hope, I gave the quinine for the first time to the extent specified. The patient was a lady of great worth to the community and her family, and the disease, which made its approach in the shape of remittent bilious fever, had lapsed into intermittent, assuming a malignancy of aspect which awakened apprehensions for the issue. I did not leave the bedside of my patient during the continuance of the last paroxysm, for it presented all the symptoms which indicate serious tendency to congestion; and I was persuaded that if another could not be prevented, she would not survive its termination. Under this impression, and having confidence in the medicine (if it could be introduced in sufficient quantity without incurring the risk of injurious effects) I resolved to disregard the rule under which I had hitherto acted, and to exhibit the quinine to an extent to be determined by its effect upon the system, given in divided doses. Commencing, therefore, as soon after the subsidence of the paroxysm as in my judgment was safe, I gave the lady four grains of sulphate of quinine every two hours (increasing the last dose to five grains) until twenty-five grains had been given—anxiously watching the effect of each dose. With a degree of satisfaction I have seldom felt under like circumstances, I witnessed the index of the clock pass the mark which had indicated the period of approach of the previous paroxysm—for I felt that my patient was safe. Her convalescence dated from that time.

Subsequently, whilst engaged in private practice, and for the first years of my service in the army, I acted under the rule comprised in the particulars of the case to which I have alluded.

In 1834, whilst on duty in Arkansas, I witnessed many cases of the malignant bilious fever of that country. The cases which came under my charge were treated in the usual way. Quinine entered into the list of remedies, but it was only exhibited *under the canon*, when an approach to intermission, or a distinct remission, was apparent. One case, however, occurs to me as an exception to what I have stated, which I will relate.

Lieutenant (now Captain) H. of the 7th Regiment of Infantry, whilst on detached service in August or September, sustained an attack of remittent bilious fever, and with a large majority of his command in like condition, was brought into Fort Gibson. For several days the fever pursued a regular course, and a favorable crisis was hoped for. Suddenly, however, a total change succeeded. The paroxysm anticipated the usual hour of incursion, and was characterized by all the symptoms of grave congestive fever,—the brain being the principal seat of congestion. In one hour after the occurrence of the paroxysm, the sensorial functions were abolished, and very soon profound coma supervened; the extremities were cold as marble,—the pulse almost extinct,—the sphincters of the bladder and rectum utterly paralyzed,—the respiration labored and irregular,—the eyes upturned and injected;—in fine the patient seemed in the agonies of death. All my sympathies being awakened for my friend, and all my anxieties for my patient, I hastened to the encounter; but I must confess with painful misgivings of my ability to contend successfully with the disease. Having at that time no precedent or authority for the exhibition of quinine in large doses under such circumstances, I gave it in divided quantities, in union with calomel and camphor, to the extent in all of twenty-five grains;—applied cold to the shorn head,—epispastics to the thighs, sinapisms to the legs and arms, and, if I mistake not, opened the temporal arteries, and applied cups to the neck. Under this treatment the patient gradually recovered, with the loss of his hearing—almost total for some time, and though ultimately greatly improved, audition is to this day somewhat defective.

In this case I confined the use of the quinine within the limit which my previous experience had taught me was safe, under dissimilar circumstances, and I shall never cease to award to it the credit of having saved to his friends, and to the service, a most worthy and meritorious officer.

If it be said that the favorable result in this case was due to the other remedies employed, and that quinine was not the efficient agent in accomplishing the cure, I can only say, in support of its claims, that I had never, *at that time*, witnessed recovery in a case apparently so utterly desperate, and that *since then*, I have only known a fatal issue averted when the quinine has been administered in large doses.

In 1840, I was assigned to the Florida army, and ordered on duty at Fort Heileman, Garey's Ferry. I arrived early in October, and succeeded to the charge of a full hospital. A majority of the cases (excluding those of intermittent fever), were bilious remittent with manifest tendency to irregular sanguineous determinations, and local congestions. Not yet having met with any notice of the modern practice with the quinine, and having as an example of the safety and advantage of its exhibition *during the paroxysm of fever*, only the solitary case of Captain H., I did not rely upon it as a principal agent, but confined its exhibition to the apyrexial period of congestive intermittent, and the period of remission, in the more continued forms of fever. My late experience in the use of quinine has induced me to marvel at the over-caution with which I exhibited it on this occasion and formerly, and I can hardly repress a smile when I bring to my mental vision the spectres which my imagination conjured up.

In November, 1840, I joined the 1st Regiment of Infantry, which had recently taken post at Sara-sota, on the western coast of Florida, a position which combined in an eminent degree all the circumstances calculated to affect unfavorably the health of troops. During the winter, the command suffered only, as might have been anticipated, from its exposed situation, taking into consideration the fact that the regiment had been three years in the field, and deprived (for the last few months at least) of a full supply of vegetable aliment. Intermittent fever prevailed to a considerable extent among the troops, and was *interrupted*, ordinarily, by the use of quinine in doses of five grains, repeated three times during the interval.

My largest experience in the use of quinine having occurred during my service with the 1st Infantry, and in the quarter ending June 30th, 1841, I beg leave to quote from my Report to the Surgeon-General's office for that period. * * * * "That the 1st Infantry has encountered disease since the last Quarterly Report, the present will abundantly testify. A strong scorbutic diathesis pervaded the command from the commencement of winter, which imparted to most of the forms of disease which occurred during that season some of the features of its own character. Dysentery, with tendency to total cachexia, and intermittent fever, constituted the bulk of the Sick Report. About the 1st of April, there occurred more cases of remittent fever than we were prepared to expect so early in the season, but surprise gave place almost to consternation, when, towards the close of the month, there were added to the sick list twenty cases *per diem* of congestive fever."

The post at Sara-sota was abandoned on the 2d of May. The sick, to the number of two hundred, or more, were taken to Cedar Keys, and ultimately transferred to Cantonment Morgan, where, the Report goes on to state, "after considerable delay, and some hurtful exposure, we are very comfortable in hospital." * * * "The seat of congestion in this fever varied in the different cases. In some the brain, in others the liver and spleen, and in some others the lungs, constituted the principal seat of engorgement, as was evidenced by the symptoms, and by autopsic examination in the fatal cases.

"Excessive prostration of physical power occurred simultaneously with the attack, and the mental functions sustained early impairment. The whole surface of the body, but particularly the extremities, became preternaturally cold after the first paroxysm (in which, however, but a small degree of increased heat was developed). A cold, clammy, or limpid perspiration accompanied this condition of the skin. The tongue, at first pale, and indented, sometimes smooth and shining, became dry and hard; the teeth were encrusted with sordes; the pulse was frequent, irritable, and often intermittent; and the alvine discharges watery, and sometimes bloody, with tenesmus. The whole surface of the body presented a shrunken and contracted appearance; the respiration was hurried and irregular; the patient, in fine, presented that indescribable picture of wretchedness peculiar to those forms of disease in which the *lædentia* impress with such intensity as to overwhelm the vital energies, and prevent the development of *normal* reaction.

"The treatment need not be fully detailed."

"But though my observation during the progress of this fever corresponds with all my previous experience in regard to the impotence (to say the least) of the lancet as a remedy in advanced congestive fever, and will induce me to banish it from my list of curative means in such cases in all future time, I am happy in having been directed to a practice, of which, if I obeyed the impulse of my feelings, I should express myself in terms of extravagant commendation. I allude to the exhibition of sulphate of quinine in twenty, thirty, and even forty grain doses, alone, or in combination with calomel. I will content myself for the present with saying, that in numerous instances, it has seemed to rescue the subjects of this form of disease from the most impending danger." * * * * * "It is due to Drs. Harvey and Randall, of the army, to admit that I entered on this practice at their urgent suggestion, —for I will confess that I entertained much misgiving of its safety. My doubts are now utterly dissipated, and I would give a half, or even a whole drachm of quinine, with as little hesitation as the old-fashioned 'ten and ten' of Dr. Rush."

Having no precise statistical record in my possession of the cases of congestive fever above alluded to, I can only state, in general terms, that the cases of disease to which I refer, in the Report, as exposed to the "most imminent danger," and to whom the quinine was administered in large doses, with advantage, could not have been less than fifty. I will further state that it was the *sulphate of quinine* that I prescribed, that it was obtained in every instance from the Army Medical Purveyor, and that in my opinion it was pure.

My subsequent experience with the article relates principally to its use in the remittent and intermittent fevers, which came under my notice in the summer and autumn of 1842, in Florida, a few cases only of congestive fever having presented themselves during this year. As a remedy in all these cases, the article fully sustained the favorable character it had previously established in my estimation.

I am not aware that I have discovered any disparity of effect in the action of the remedy determined by the different states of the system, in reference to its tonic or atonic condition. I have never exhibited it when there seemed to be present an inflammatory diathesis (contra-distinguished from a febrile condition), nor would my recent experience induce me to rely with confidence on the quinine, as a supporting agent, in a prostrate condition of the system, unless the prostration could be regarded as the effect of the febrific agency (malaria), still in operation.

I have not witnessed injurious effects from the medicine in any case that I can call to memory, and the only unpleasant symptoms that I have observed to follow its use, were more or less buzzing in the ears, and, occasionally, slight dizziness. These symptoms have uniformly subsided with the paroxysm.

Modus Operandi of Quinine.—It is said that the cotemporaries of the Countess of Cinchon—the Friars who first published the fame, and disseminated the use of the Peruvian Bark as a remedy for intermittent fever,—regarded it as a *specific*, perhaps as an *antidote* to the poison of malaria; and modern observation seems to have furnished some reasons for doubting if the speculations which have been indulged by their successors have led to any better conceptions of the modus operandi of its efficient principles. With the profession it is dangerous at the present day to talk of "*specifics*," or even of *antidotes*, unless we are ready with a philosophical *rationale* of every step in the process by which the end is attained;—yet, however humiliating to the pride of science, we must admit that there are many things connected with the principles and practice of medicine that we do not comprehend. Individuals form theories, they indulge in elaborate and ingenious hypotheses, and admire the creations of their fancies—the fictions of their closet speculations, until they actually persuade themselves, and others too, that their conclusions are the result of legitimate deductions from ascertained facts,—that even the spirit of Lord Bacon himself presides over their deliberations and has affixed its seal to the truth of their philosophy. These systems are destined to last until some succeeding revolutionist in medicine saps their foundations, to erect on their ruins a superstructure no less comely to look upon, but awaiting, in after time, a similar fate; because speculations, and not facts, constituted their basis. Thus it has ever been since the dawn of medicine, and we apprehend its future historians will but record a succession of like events, until it shall have established for itself a place among the fixed and certain sciences.

We would not controvert the truth of the position that medicine has made great strides in the way of improvement, within the last century. On the contrary, we are proud to boast that every year has added to the resources of the art; for genuine inductive philosophy has infused its spirit into the investigations of many of its ardent cultivators. But there are many secrets yet undivulged in philosophy and therapeutics, and perhaps a precise and definite conception of the manner by which certain medicines effect a cure in diseased conditions of the system, will remain among the desiderata until medicine shall have received the last finishing touch from the hand of science.

We mean these remarks as prefatory to the expression of a doubt whether the bark or its proximate principles, arrest intermittent fever, and other forms of febrile disease dependent on miasmatic origin, by virtue of the tonic property inherent in them. We are not prepared fully to deny that the medicine possesses tonic properties; it is an opinion sanctioned by the concurrent belief of the profession for more than a century. But my late experience authorizes and inclines me to believe that the remedy exercises over fevers of this genus a peculiar and specific control, independent of, and distinct from, any effect which it may be presumed to have upon the *tonicity* of the muscular fibre.

Some practitioners, whose experience in the use of this medicine has been by no means inconsiderable, have been led by observation of its effects, to class it among the *Sedantia*, and several plausible articles have been written in support of this view of its properties. It must be admitted that if I were reduced to the alternative of adopting one or the other of these opinions in regard to the character of the medicine, my late observations would incline me to entertain the latter—although some unexplained facts would still stare me in the face, and perplex my understanding.

They who contend that its curative agency is due to a direct effect on the tonicity of the muscular fibre, would proscribe its use in all cases where this vital property, or the contractibility of the muscular system, might be presumed to be in an exalted condition. But the physician experienced in diseases of southern climates will tell you that he is in the practice of administering it when the condition of these vital properties is, seemingly at least, above par. For instance, he exhibits the article at the very height of the paroxysm of the remittent fever of his climate, and finds as a result of its action, a reduction in the force and frequency of the pulse,—a diminution of animal heat,—a moist condition of the skin,—a subsidence of pain and restlessness; in fine, a sudden conversion from febrile disturbance to fair convalescence. Now, if the experience and observation are right, can the theory be otherwise than wrong? On the other hand, those who maintain that the remedy acts by sedation, do not hesitate to exhibit the article when the powers of life are depressed to the utmost limit compatible with existence; and they aver that its agency is curative under these circumstances. True it is that the writer has himself frequently given the quinine in both of the conditions stated, and in both his experience teaches that advantage resulted from the practice. He has witnessed a decided improvement to follow the exhibition of ℈ij. of quinine, repeated in two hours, in advanced congestive fever, when the condition of the case was characterized by a lethargic state of the sensorial functions, verging on coma,—cold extremities,—cool surface, bathed in limpid perspiration,—dry and pallid tongue,—feeble and fluttering pulse, &c. And again, whilst on duty in Florida, in the summer of 1842, in charge of the General Hospital, it was his usual custom, after attentive observation of the safety of the plan, to exhibit twenty grains of quinine *at any period of the paroxysm* of the remittent fever of that country, and he is safe in declaring that the practice was successful—as the Quarterly Report to the Surgeon-General's Office will testify, not a single death from remittent fever having been reported during the season, nor from its sequelæ.

In southern climates, where high atmospheric temperature prevails, the system, it is well known, becomes languid and relaxed. This condition is the effect, no doubt, of the exhausting influence of the prolonged action of caloric. Indirect *debility* is induced, and with this loss of tone in the system, its *irritability* is exalted. Excessive mobility is impressed on the whole apparatus of life. The pulse is quickened, morbid sensibilities and new susceptibilities, mental and physical, are awakened, and hence do the "children of the sun" become distinguished for all that relates to temperament and disposition—all that constitutes peculiarity of sectional character, from their cool, calculating, deliberate brethren of the North.

But if this is true in regard to the system in health, it is no less so when it is under the influence of morbific agents; and it might, with some show of plausibility, be maintained that, in this condition, *tonics* operate indirectly by *sedation*,—quieting excitement by imparting tone. And thus, perhaps, would they who entertain this view of the medicinal properties of the quinine reconcile their notions of it with its effects, as illustrated in the cases of fever in which it has been given with advantage in the *pyrexial* period.

It is said that recent observations in other countries have demonstrated the advantage of quinine in acute inflammations, rheumatism, and other forms of disease in which stimulant tonics are, confessedly, not only inappropriate, but manifestly pernicious. We have the testimony of such men as Morton, Fothergill and Haygarth, of the last age, in favor of Peruvian bark in inflammatory rheumatism; and the present professor of midwifery in the University College, London (Dr. Davis), furnishes unequivocal evidence of the paramount advantage of the remedy in such cases. (London Lancet, Feb., 1841.) The writer has no experience of its effects, when exhibited in such conditions of the system, but if time should verify its claim to confidence in these diseases, it will but furnish another argument in support of the position assumed, that its medicinal properties are not fully comprehended or established.

There are strong reasons for believing that the antimonial medicines possess direct febrifuge virtues, independent of any influence they exert over the heart and arteries by their mere nauseating effect upon the stomach.

The action of mercury in the cure of lues venerea has never been explained in a way that can seem satisfactory to those who profess to exhibit no article of medicine the precise physiological effect of which they do not understand. To designate a whole class of remedies as "alteratives," is but to admit that they produce their effects in some occult way which we do not comprehend,—in fact, I might go on to enumerate almost one-half of what is contained in the *armentarium* of physic, and include the whole in this category,—but I will conclude what I have to say in regard to the *modus operandi* of quinine in the fevers of malarial regions, and write myself the advocate of the notion entertained by the Jesuits, to wit: its agency is *specific*.

It is thought that this article, in combination with mercurials—calomel particularly—accelerates the supervention of ptyalism. I have no doubt of the fact. I am disposed to ascribe it to a presumed chemical decomposition in part of the combined articles in the stomach, and a new arrangement by which the activity of the mercurial would be increased; or, if the chemists advise that no incompatibility exists between calomel and quinine, and that no such presumed change can take place in the stomach to account for the alleged fact, then I would suggest that the latter article facilitates the mercurial action simply by counteracting the morbid impression of the febrific agent, and the diseased condition hence resulting, by its specific effect, thus bringing the susceptibilities of the system to a condition approximating the healthy standard; for it must be admitted that first in proportion to the intensity of morbid action is the difficulty in establishing the constitutional operation of the mineral in any given case of disease.

Has the free use of quinine increased the disposition to diseases of the bowels—e. g., Diarrhœa and Dysentery?

Broussais, in his "Chronic Phlegmasia," has shown, as we think, very satisfactorily, that long-continued atmospheric heat, combined with moisture, has an invariable tendency to induce chronic inflammation of the mucous coat of the larger bowels, thus giving origin to diarrhœa and dysentery, with ultimate liability to ulceration of the colon and rectum. High and long-continued heat and moisture distinguish the climate of Florida; and when it is remembered that the centripetal tendency of the fluids, in the cold stage of intermittents (so frequently recurring among the troops serving in that Territory), determines congestive accumulations and irritations in the internal organs, we think that the prevalence of diarrhœa and dysentery, under these circumstances, is susceptible of explanation without charging anything to the account of quinine.

No pathological view of these diseases can, it is believed, be correct which is irrespective of the condition of the skin. It is fair to presume that this organ is primarily impressed, and that the lining membrane of the primæ viæ is implicated in virtue of the intimate sympathy which is acknowledged to exist between it and the former. The persistence of the bowel affection is then probably due to the derangement of the dermoid apparatus, and, until the latter is restored to its integrity of function, the morbid condition of the bowels can hardly be expected to subside under any plan of treatment.

Broussais has remarked somewhere that when the skin in these forms of disease presents a straw-colored appearance and inelastic condition, ulceration of the mucous coat of the bowels may be apprehended; and that, in a large majority of such cases, a fatal result will ensue.

A very enlarged experience with the bowel affections of Florida has impressed strongly on my mind the opinion, that there are few forms of disease in the catalogue less amenable to the resources of the art.

Post-mortem examinations were instituted in a large majority of the fatal cases in the General Hospital at Cedar Keys, as well as the Post Hospitals at different times under my charge in Florida. My observation teaches that the liver and spleen less frequently presented evidence of diseased condition than is usual in sections of the country where miasmatic causes of disease prevail. The proportion of cases in which these complications existed was infinitely smaller in Florida than I had previously observed in Arkansas. Even the swelled spleen, so common in other aguish districts, was a rare spectacle.

I can readily conceive, in explanation of this apparent immunity from congestive enlargements, and from other obvious disease of the liver and spleen, that, where ulceration exists in the larger bowels, in obedience to the law, pathological as well as physiological, "ubi irritatio, ibi affluxus," the fluids impelled towards the central organs (under circumstances calculated to produce irregular distributions) are diverted to the point where irritation exists in greatest intensity. In other words, the irritation of the bowels serving as a "diverticulum," secures the liver and spleen from an influx of blood, sufficient to derange their healthy functions, much less to leave, after death, appreciable traces of organic lesion. I have no reason, therefore, to think that the use of quinine had any agency in inducing acute and chronic affections of the liver and spleen.

With the exception of some few cases of acute dysentery, the fevers above alluded to, and some cases of inveterate ophthalmia, the great majority of the sickness which came under my notice while serving in the Territory of Florida was of a chronic character, and mostly consisting of the protean forms of malarial disease.

Surgeon General's Office, July, 1845.

Art. IV.—*Case of extensive Disease of the Heart, Brain, &c.* By S. Conant Foster, M.D., of New York.

Mr. J. M., æt. 26, an artist by profession, consulted me about the middle of November, 1844. The history of his case was as follows:—For seventeen years past he had been the subject of asthma, which at one period reached such a degree that he was unable to lie down for months, and even years at a time. He had made one or two voyages to other climates during this time with temporary relief, the disease, however, returning with equal severity. At length, however, it had begun to leave him gradually, and since March, 1844, he had not had an attack. Since the asthma had disappeared he had been much troubled with rheumatism of a subacute character, affecting all the joints in turn. He had been, for some time past, unable to pursue his profession. He had tried different plans of treatment, including homœopathy, without success.

When Mr. M. first came to me, he was in the following condition:—Countenance sallow; lips pale and bloodless; emaciation considerable; pulse 120, weak; tongue covered with a thick white coat; appetite little or none; bowels habitually constipated. Rheumatism now confined to joints of right leg, making him somewhat lame, but can walk, notwithstanding, three or four miles a day. Occasionally has slight pain in left præcordial region, and once or twice a severe pain in left iliac region. Says his memory is bad.

The first indication seemed to be to improve the state of the digestive organs and to obtain relief from the rheumatic pains. The diet was accordingly regulated, and some mild laxatives directed, under the use of which his bowels became regular and his appetite returned. The iodide of potass in moderate doses soon removed the rheumatism; still his pulse kept up to 120 or 130, and he acquired strength very slowly. I was therefore led to examine with more care than I had yet done the thoracic viscera. On percussion the lungs were found everywhere resonant, and the respiration was everywhere good. No râles and, indeed, nothing abnormal was detected. Examination of the heart gave the following signs:—Impulse very strong; apex strikes against the side at least an inch further than usual from the sternum; dullness on percussion not more extensive than usual; at the junction of the third and fourth ribs with the sternum is heard a loud *bruit de soufflet*, synchronous with the pulse, which marks both of the natural sounds of the heart. This becomes less loud as the ear approaches the apex, allowing the sounds to be heard more and more clearly, until at the apex both sounds are clear. On the left side of the heart the bruit is again heard, but less loud; and also in the back. Second sound fainter than usual.

I now put him upon the use of digitalis, which, in the course of a few days, brought down his pulse to one hundred or less. When I again examined him, I found the impulse of the heart much diminished, and the souffle accompanying the first sound less loud. In the course of three or four weeks a material change in the signs took place. The impulse became about natural; the apex was felt nearly in its usual situation; the bruit accompanying the first sound had diminished. But now was heard a murmur accompanying the second sound, loudest at the apex of the heart, giving the idea of disease of the mitral valve. He had been taking, for a week or two, the Tinct. Ferri Chloridi, and under moderate doses of this remedy he materially improved, expressed himself as much better, and gained flesh, strength and appetite. The pulse got down to eighty-five or ninety. When the rheumatic pains returned, which they did two or three times, he omitted the tincture, and took instead the iodide of potass, which always relieved him in a day or two. He had no more of the pain in the iliac region. His bowels were regular, once or twice only requiring a laxative. Diet chiefly vegetable, eating only a small quantity of meat at dinner.

He continued to improve until the last of January, when he contracted a cold with cough, which put him back somewhat, but was passing off without remedies, and had nearly left him on the 9th of February, when he visited me at my office, and appeared to be again recovering his strength. Said his bowels were free and appetite good. On the 11th of February, his father came for me to visit him at his house (which had not before been necessary), and I ascertained as follows:—On the day before, he had tried, for the first time in many months, to use his pencil—(and had given a lady, whose portrait he was taking, a sitting of an hour and a half). Could not see distinctly more than half of this time; and felt that he was making a great exertion. After this, he walked a short distance to the house of a brother artist, and complaining of exhaustion, was offered whiskey-punch, and took a small quantity. In the evening was seized with an intense headache, which still continued when I saw him, though not quite as severe. The pulse was frequent and tongue slightly coated. Stated that he had had a passage from the bowels that morning, as well as one the day before. I directed a mustard pediluvium, and cold, to the head. The directions were but imperfectly followed; and, on the next day (Feb. 12), when I visited him, I found him in bed, and learned that he had had an increase of headache the previous evening, and in the night what his friends described as a fainting fit. His own account of it was, that he had got out of bed early in the night to have a stool, and fell on the floor, remaining there insensible for a considerable time, but at length coming to, and regaining his bed without assistance. A more particular account could not be obtained, as his recollection was confused on all points.

Dr. Hogan, a connexion of his, happened to see him this morning, and applied sinapisms, and gave him a turpentine enema, which had just operated when I saw him, bringing away a considerable quantity of dark-colored fæces. The headache was intense, there was great prostration, and an expression of extreme misery on his countenance. In the evening he was somewhat better, but the headache still severe. Did not remember having seen me in the morning. Answered questions correctly but slowly, and with apparent effort. Right pupil considerably dilated and sight obscure. Directed a laxative.

The symptoms of these two days present the first indication of any disease within the cranium, if we except the impaired memory early in the case. The headache and dilatation of the pupil continued till death.

Feb. 13. Dr. Beck saw him with me in consultation. Condition about the same as last night. One slight operation on the bowels. Tongue moist, with thin white coat. Pulse upwards of 100, weak. It was agreed that nothing could be done but to continue the counter-irritation to the extremities, and the cold to the head, and to keep up a free action on the bowels. A draught of Ol. Ric. and Ol. Terebinth, each ℥vj, was given, which operated freely.

He did not leave his bed for a fortnight from this time. During this confinement his bowels were kept free by laxatives, his pulse becoming slow and fuller, about sixty a minute, and his appetite returning. He was a good deal troubled with rheumatism in the right leg, particularly the hip joint. The remedy so successful before, the iodide of potass, having failed, though given in much larger doses, recourse was had to sulphur, which he took for several weeks with evident benefit. The rheumatic pains left him, and he gained strength enough to sit up all day. I should mention that, during his confinement to the bed, he had frequent epistaxis, at times rather copious. This recurred two or three times afterwards, but less freely. No attempt was made to check it.

From about the first of March to the end of the first week in April he remained in nearly the same state. The headache was constant; sometimes a little better, but always bad. Cupping, blistering, &c., were tried, without, I confess, much hope on my part, and all failed. Indeed, the cupping was followed by a marked aggravation of the pain. At first, it occupied the whole forehead, but soon became seated on the right side; dilatation of the pupil also continued. About the 10th of March, after an unusually severe headache, the right eye was observed to be affected with strabismus, and a fortnight after ptosis came on, and these symptoms remained permanent. No symptoms of any disorder of the lungs or heart showed themselves, except that he had sometimes slight pain in the left chest on turning over in bed, and that, on three or four occasions, there was a double pulsation felt at the wrist. The number of the pulse was pretty constantly eighty. Once or twice he was seized with the pain in the lower part of the abdomen, before spoken of, which lasted from thirty-six to forty-eight hours, or more, in spite of remedies, and then subsided of itself. Appetite and digestion were excellent; tongue clean, or nearly so; and bowels acting regularly and naturally. He was allowed to eat animal food once a day, and any nutritious and easily-digested aliment that he fancied, avoiding all stimulating articles. He sat up all day, and was generally able to go from his bed to his chair and back again without support. But he gained neither flesh nor strength.

On the 7th of April he had a fall, owing to his imperfect sight, objects seeming nearer than they really were; and his pulse, on the following day, was 120; tongue somewhat furred, and headache very severe.

April 9.—Pulse 108, feeble. Was kept awake nearly all last night by asthma, which he has not had before for more than a year. Knows of no cause for this paroxysm. Voice feeble; headache not quite as bad as yesterday; ptosis of right eye-lid complete; sight of left eye good, but pupil moves rather sluggishly; tongue cleaner; bowels moved yesterday, P.M.; appetite good.

10th.—Pulse 112, feeble and undulating; headache worse; pupil of *left* eye somewhat dilated—says the sight of it is good, however, except that if he reads, the page soon becomes blurred. When the right eyelid is raised, the pupil is seen dilated as before, and objects can only be distinguished by that eye when placed in a strong light.

11th.—Head easier; left pupil returned to natural condition; pulse 112, still weaker than yesterday; tongue clean; copious evacuation this morning. Examined the heart through the shirt and thick flannel; impulse very feeble. Accompanying the first sound is a loud murmur, rough and in a low key, loudest at the margin of the sternum in the third intercostal space. Second sound indistinct, and, as you approach the apex, is wholly absent. The murmur is heard all over the anterior part of the chest, and is sufficiently loud to mark the respiration. Could not make a very minute examination on account of his weakness.

12th.—Much the same as yesterday. Pulse felt in both wrists, and found to be much more feeble in the right than in the left. (I had compared them before several times, and found no difference.) There is also to-day a distinct double beat. Since the attack of dyspnœa, on the night of the 8th, the chest has felt uneasy, though not alsolutely painful.

He now continued to fail very gradually. Had occasionally slight pain in left chest, and dyspnœa at night. On the 25th, his ankles and face became swollen; pulse 100, very feeble; appetite still good, and bowels regular; tongue slightly coated.

May 5th.—Pulse in right wrist almost imperceptible; respiration laborious, thoracic; mouth slightly distorted. Says he is almost free from headache to-day.

7th.—Was more than usually animated in the afternoon of yesterday, talking and laughing; at the same time he complained of numbness in his fingers. This morning I found him in bed, his face drawn up on the right side, and the power of articulation gone, or extremely imperfect. Reason seems clear. When asked to put out his tongue, does so with difficulty, and it is drawn strongly to the right side. Pulse in right arm and in right temporal and carotid arteries is absolutely wanting; counted at left wrist 104, weak; bowels were moved yesterday.

8th.—Paralysis of the left side; loss of motion, and partial loss of sensation. Spoke imperfectly to-day, and asked for ice-cream. Mind wanders at times; pulse 104; urine in bed.

9th.—Speech improved; paralysed limbs swollen. Says he has no pain anywhere but in his head, and that is better than yesterday. Appetite strong, but from difficulty of swallowing has only taken a little panada and some calves'-foot jelly; breathing short and difficult; no dejection.

10th.—Dysphagia increased; no pulse in right brachial or carotid; no dejection. Ordered a terebinthinate enema.

11th.—Sinking. Pulse extremely feeble; clammy perspiration.

12th.—9, A. M. Pulse scarcely perceptible; extremities cold; breathes with great difficulty; has not attempted to speak since yesterday morning, and cannot swallow even liquids; groans occasionally, and seems as if in possession of his reason. At this time one would have supposed that he could not live an hour. The day was very sultry, but in the afternoon there came up a thunder-shower. I saw him after it had passed over, and found a remarkable change in his appearance. He was breathing much more easily; had a fuller pulse, with considerable warmth of surface, and dry skin. During the day he had never attempted to speak or swallow; several times had hiccough, and once or twice a paroxysm, as if he were suffocating.

13th.—Ever since the thunder-shower yesterday has seemed easier; vomited two or three times during the night; now pulse 120, tolerably full; pulsations have returned in right arm and carotid and temporal arteries; skin hot and dry; eyes constantly oscillating, and pupils irregularly contracting and dilating, right less than left; respirations through the nostrils only; puffs out the lips at every expiration; slight tendency of paralysed limbs to a flexed position. 8 P. M.—Pulse 120, full; skin very hot and dry, giving the burning sensation common in scarlatina. Twice since morning has had something like an epileptic convulsion, attended with spasmodic contractions of the limbs and face and difficult respiration, and followed by a discharge of yellowish frothy matter from the mouth.

He died at half-past four on the following morning, sinking quietly without any further convulsive effort.

Autopsy at 11 A. M., 6½ hours after death. Assisted by Dr. J. O. Stone and Dr Hogan.

Externally, emaciation extreme; small petechiæ scattered over whole trunk; percussion gives a flat sound over rather a larger space than usual in the præcordial region; elsewhere the sound is good, not dull nor morbidly resonant.

Head.—Dura mater somewhat congested, blood flowing freely from its vessels on removing the calvarium; about an ounce and a half of fluid under the dura mater; pituitary body enlarged and indurated; considerable injection of the pia mater, and deposition of lymph between it and the arachnoid—in one spot of the size of a shilling—over the anterior lobe of right hemisphere; whole substance of brain rather softer than usual; roof of right ventricle, corpus striatum reduced to the state of pulp or cream, which sticks to the finger when passed over it; some fluid in the ventricles. In the substance of the corpus callosum is found a drop or two of well-formed pus. At the base of the brain, directly in front of the fons varolii, and between the crura cerebri, was a tumor about three-quarters of an inch in diameter, which proved to be an aneurism of a branch of the basilar artery. The softened parts of the brain were not discolored, and the vessels traversing them, which were drawn out like threads from their substance, seemed healthy.

Thorax.—On opening the chest, the lungs did not collapse as much as usual; right lung attached to the parietes of the thorax by old adhesions; left pleura contained about four or five ounces of fluid; lungs everywhere œdematous, the serum flowing freely from them when cut, except a strip of about an inch or two broad of the free edge of each, which is emphysematous, the air cells being distinctly visible through the pleura. Attached to the lower lobe of the left lung is a lobule about two inches long by one and a half broad, exhibiting a specimen of what might be called *extra-lobular emphysema*, being apparently a single lobule, of which the air-vesicles have become so dilated as to push it out and almost detach it from the rest of the lung. The *pericardium* contained about five ounces of serum, but no lymph—the membrane itself polished and smooth as usual. The *heart* was enlarged to more than twice its natural size, and its parietes everywhere thickened and cavities dilated. Right cavities two-thirds filled by a polypous concretion, resembling the buffy coat of the blood (cadaveric), and a similar but smaller concretion in the left ventricle, the remaining space being occupied by dark coagula. Valves of the aorta and pulmonary artery and tricuspid valves all normal. The mitral valve overgrown, and, in fact, degenerated, except a very small portion, into a mass of warty vegetations. These extend to the posterior wall of the auricle, which they cover almost entirely, being, in some places, nearly half an inch in thickness. In consequence of these, there is a permanently patent condition of the auriculo-ventricular orifice, though it is much diminished in size.

Abdomen.—Liver large and dark-colored, tissue firm; intestines and omentum presented a dirty livid appearance, as if from venous congestion. Between the laminæ of the mesentery, opposite the ileo-cœcal valve, was found a dark-colored tumor, about four and a half inches in the long, by three and a half in the short diameter, which, being opened, was found to contain half-decomposed coagula, except a smaller portion, about the size of a Madeira nut, which presented several concentric layers of fibrin, enclosing a small cavity. It would seem to have been an aneurism; but, upon careful examination, no artery could be traced into it. A smaller aneurism was found in the course of the inferior mesenteric artery, about two inches from the aorta. The arterial coats in other places appeared perfectly healthy.

It being desirable to conclude the examination, the other organs were not examined.

Remarks.—Upon a review of this case, the first circumstance that strikes us is the comparative absence of symptoms up to a late period in the disease, considering the number and extent of the organic lesions. The asthma had entirely left the patient, and that, too, in a gradual manner, nearly a year before he came under my notice. There was at that time neither pain, palpitation, cough nor dyspnœa. After the dyspeptic and rheumatic symptoms had been removed, no symptom existed pointing to any one organ as the cause of his continued weakness and emaciation; and probably the disease of the heart might have gone on much longer undiscovered, had not the physical exploration revealed it. But after this was detected, there then was still a difficulty in the diagnosis as to the exact nature of the organic change. The cause of this difficulty was, in a great measure, explained by the post-mortem appearances. The increased impulse had led to the suspicion of hypertrophy; but this did not continue long, and there was no increase of dulness on percussion, owing, doubtless, to the pulmonary emphysema. The morbidly-increased resonance of the emphysema was in turn prevented by the enlargement of the heart. Aneurism was once suspected, but subsequent examinations led me to reject this idea, until the pain in the chest in the latter part of the disease, the double pulsations at the wrist, and the cessation of the pulse in the right arm and neck, together with the loud blowing sound heard in the back, led me again to entertain a suspicion of it. The cessation of the pulse remains unaccounted for. Perhaps a more exact examination might have discovered some enlarged lymphatic gland pressing upon the great arterial trunks with sufficient force to interrupt the then weakened circulation. The disease of the mitral valve was fully made out at an early period, though I was not prepared to find it so extensive.

Of the two tumors in the abdomen, the smaller was undoubtedly an aneurism, and the larger must perhaps be so considered, though the artery upon which it was formed could not be detected, and must of course have been very small. Thinking there might be such disease, I examined during life for it, but failed to detect any pulsation or tumor. The attention was more especially directed to the left iliac region, to which the pain was referred, but the disease was in the right.

To which of the lesions within the cranium are we to attribute the symptoms, headache, dilatation of the pupil, strabismus, ptosis, hemiplegia? Probably to the softening of the brain, or rather let us say that the softening and paralytic symptoms are coincident effects of the same cause. Whether that cause is inflammation or something else, we are, I believe, as yet, very much in the dark. If the softening was the cause of any or all of the symptoms, how long had this condition existed? The headache and dilatation of the pupil occurred very suddenly, 3 months before death, and lasted till death took place. Did the softening exist previous to these symptoms, or did it commence at that time, or subsequently? These are questions difficult to answer in the present state of our knowledge. As to the pus found in the substance of the corpus callosum, this can only be attributed to inflammation. I presume it was formed but a short time before death, and was, perhaps, connected with the epileptic paroxysms on the last day of life. The part containing it, though softened, was by no means as much so as the roof of the ventricle and corpus striatum which contained none. There was no discoloration or injection of the vessels of either part. This is important as proving that inflammation may occur in the brain, and go to the extent of producing pus without any discoloration or increased vascularity appearing after death. The aneurism of the basilar artery had perhaps something to do with the symptoms, and if found alone might have been thought sufficient to account for them all, but we know that they have existed without producing any symptoms whatever as long as they remained entire, and therefore we cannot connect any one with certainty with this lesion.

One further circumstance in this case deserves notice. I allude to the remarkable febrile reaction during the last forty-eight hours of life. How far this was the effect of the thunder which immediately preceded it, every one must judge for himself. For my own part, I have little hesitation in ascribing it to that cause.

The treatment of this case was simply palliative. I am not aware that any change could have been advantageously made, had we possessed a more exact knowledge of the actual morbid conditions of the heart and brain. Certainly no treatment could have much prolonged his life. He was never in a condition to admit of depletion or even a low diet, and considering the amount of disease in the different organs, it is perhaps wonderful that he had not died long before, and that while he lived he was able to attain to any tolerable degree of comfort.

Art. V.—*Cases of Poisoning by Belladonna.* By H. M. Gray, M.D., of New York, Physician to the N. Y. City Dispensary.

Case I.—The subject of the first case was a child between two and three years of age, who had been suddenly seized with alarming symptoms. Suspecting the patient to be laboring under the effects of poison, an inquiry was instituted to ascertain the fact. The mother found in the possession of the child a box from which she had been eating, as shown by the stains upon her lips and fingers. It proved to be the extract of atropa belladonna, which had been used a short time previously by one of the family, in a neuralgic affection. The amount swallowed, as near as could be ascertained at the time, was from eight to twelve grains. The following symptoms presented themselves upon seeing the case some thirty or fifty minutes after the drug had been taken into the stomach.

The expression of the countenance was that of a person in *terror—pupils widely dilated* and *immovable*—the *tunica conjunctiva highly injected*, and the *whole eye prominent and preternaturally brilliant.* The face, upper extremities, and trunk of the body exhibited a diffuse scarlet efflorescence studded with innumerable papillæ, very closely resembling the rash of scarlatina; the eruption terminated abruptly at the wrists and flexure of the thighs, the rest of the body retaining the natural color. Skin hot and dry, and pulse much increased in force and frequency.

The patient's manner was apoplectic, respiration anxious, and attended with the brazen, stridulous sound of croup. A constant but unsuccessful effort at deglutition was observable, and at every renewal of the attempt the muscles of the throat and pharynx would be thrown into violent spasmodic action. Severe engorgement of the venous trunks was also present. This state of partial coma was alternated by paroxysms of uncontrollable tendency to motion and rapid automatic movement, attended with convulsive laughter. No well marked convulsions made their appearance, although during the brief periods of sleep into which the patient would fall, a slight subsultus of the muscles of the face and extremities was noticed.

The treatment was that ordinarily pursued in similar cases. The lower extremities were immersed in a mustard bath, while water and pounded ice were applied to the head. An active emetic was immediately administered whose operation was induced by the application of local stimulants to the epigastric region, and the free use of warm diluents. The matter vomited contained several portions of the drug in a partially dissolved state. As soon as free emesis had been procured, a strong decoction of coffee was ordered, to combat the soporific effect of the poison, alternated with diluted aqua ammonia for the purpose of decomposing any of the belladonna that might still remain in the stomach. The diuretic effect of the atropa now began to be experienced, the patient evacuating an enormous quantity of limpid urine. The alarming symptoms passed off in about three hours after the commencement of the treatment, and the child soon recovered with the exception of a moderate diarrhœa, and a slight enlargement of the pupil. The eruption had entirely faded.

Case II.—I will relate another case, concerning which I can speak somewhat experimentally, it having occurred in my own person. It is of interest only inasmuch as I was able to note accurately my own sensations during the action of the narcotic. This is an interesting point in the investigation of cases of poisoning, and one about which little can be known, as patients are generally too much occupied with their fears or actual sufferings, to be able to impart much knowledge of their sensations. Although pretty thoroughly narcotized, I watched with some curiosity and care the phenomena induced by belladonna. I had taken an unwarrantably large dose of the article in question, to quiet the pain of a severe neuralgic toothache; not finding any relief, I repeated it in the course of ten or fifteen minutes, swallowing in all some eight or ten grains. About an hour after the last dose had been taken, the medicine began to induce its specific symptoms in the following order. First, vertigo, increasing to such an extent as to render it impossible to walk without staggering. The dizziness which was at first transient, soon became continued, and very severe. Now came on the affection of the eyesight, every object growing dim, as though a cloud were between the eye and it. Sometimes objects appeared double, and with an undulating motion passed before the eye. I observed that by a strong effort of the will, a concentration of the nervous power, this paralysis of the retina might for a moment be combated; but only to return with greater severity when the mental effort had been succeeded by its corresponding relaxation. The appearances of the eye were much the same as those mentioned in the former case, viz.: pupil *immovably dilated;* eye *prominent*, *dry*, and *exceedingly brilliant.* The conjunctival vessels were fully injected. There was *total absence of lacrymation*, and *motion* was *attended with a sense of dryness and stiffness.* The face was *red* and *turgid*, and the *temperature* and *color* of the surface *considerably augmented.* Pulse *full*, and about 120 to 30. The feeling in the head was that of *violent congestion, a full, tense, throbbing state* of the *cerebral vessels*, identically the same sensation as would be produced by a ligature thrown about the neck, and impeding the return of the venous circulation. The peculiar state of the throat next excited attention. The *tongue, mouth* and *fauces were devoid of moisture, as if they had been composed of burnt shoe leather.* The *secretions* of the *glands* of the *mouth, and the saliva, were entirely suspended.* A draught of water, instead of giving relief, seemed only to increase the unctuous, clammy state of the mucous membrane. About the bag of the pharynx this sensation was most distressing. It induced a *constant attempt 'at deglutition*, and finally excited *suffocation, spasms of the fauces and glottis*, renewed at every effort to swallow. A *little saliva, white*, and *round* like a *ball of cotton*, would now and then be evacuated.

The slight delirium that followed the action of the narcotic, was of a strange, yet not unpleasant kind. I wished to be in constant motion, and it certainly afforded me an infinite deal of satisfaction to be able to walk up and down. The intellectual operations at times were very vivid. Thoughts came and went, and ludicrous and fantastic spectacles were always uppermost in my mind. I was conscious that my language and gesticulations were extravagant, yet I had neither power nor will to do otherwise than I did; and notwithstanding my bodily malaise, the mind was in a state of delightful exhilaration.

The treatment was very simple; cold douche to the head, and an emetic, soon destroyed the dominion of the poison.

In this case as in the other, I found some difficulty in provoking the operation of an emetic, owing to the insensible condition of the stomach. After vomiting, the disposition to sleep became very urgent. Strong coffee, however, counteracted this tendency.

One other fact with reference to the effects produced by Belladonna is worthy of note, viz.: its *tremendous diuretic power.* I have observed that it does not seem to reach the kidneys, until it has been some time in the stomach, and has exerted its specific influence upon the brain. But its power over the secretion of urine seems to be very great. I am confident I passed in the course of an hour three pints of urine, accompanied with a slight strangury at the neck of the bladder

The nature, properties and effects of atropa belladonna are so well known, that I need not enlarge this paper by alluding to this subject. As there appears to be no positive antidote to its poisonous effects, the treatment must be based upon general principles.

Reasoning from the effects it produces upon a healthy body, its indications in disease become evident. From its property of dilating the pupil it becomes an indispensable in the treatment of iritis, and incipient cataract. In many other affections of the eye, it is a remedy of essential importance. Its effects in painful ulcerations—in pertussis—in neuralgia, and in a host of nervous maladies, are universally recognized.

From its effects as observed in my own case, I am induced to believe that it may become an important remedy in diseases, in the treatment of which, at present, it is but little used.

We have seen the entire suppression of the lachrymal and salivary discharge which it induces. Now in stomatitis, either aphthous, or mercurial, attended with profuse discharge of saliva, and in epiphora of the lachrymal sac, I cannot see why it is not the very remedy indicated. In irritability of the eye, more particularly of the retina, its quieting effect would be of immense service. In the cachectic dropsies, attended with great irritability of system, it might also be of use. In anæmia of the brain its congestive powers might be used with evident advantage. The catalogue might be extended, but it is sufficient for purposes of illustration. At all events whether we adopt the principle, "similia similibus curantur"—or "contraria contrariis curantur," the only effective mode of discovering the indications of disease, and the proper application of therapeutic agents to meet or combat these indications is by experiments upon the healthy, as well as the diseased body, carefully watching the effects produced in each.

Art. VI.—*Case of Intussusception terminating favorably by the Discharge per Anum of Intestine, about sixteen inches in length.* By Alfred B. Dayton, M.D., Middletown Point, Monmouth Co., New Jersey.

To the Editor of the New York Journal of Medicine.

Dear Sir—The substance of the following communication having been read before the Medical Society of New Jersey, convened in New Brunswick, May 13th, 1845, a resolution was passed by the Society, requesting me to furnish a copy to some Medical Journal for publication. In accordance with such resolution I submit it to your pleasure, should you deem it worthy of a place in your valuable Journal.

The patient, J. R. W., aged about thirty-five years, by occupation a shoe-maker, was engaged in the city of New York, buying and selling in the market. He had abandoned, to a certain degree, his trade, in consequence of a pain in his right side, arising from hypertrophy of the liver. His general health for a number of years had not been good. He had been at two or three different times attacked with severe colic, which, under treatment, subsided in about the usual time. While engaged in attending to his ordinary business in the market, without at the time making any immoderate or violent exertion, he was attacked with severe pain in the right lumbar region of the abdomen, for which he was bled, and took a cathartic, which operated freely: he was partly relieved, and brought to his residence in the country, so that I was first called to him about three days after the attack. At this time he was suffering from extreme pain in the right side, before spoken of, with considerable tenderness of the abdomen generally; and from this time, for the space of about four weeks, he continued to suffer at short intervals the most excruciating pain, except when under the influence of anodynes. The pain was located more particularly in the one spot, yet extending, more or less, over the whole abdomen; and so agonizing was it, that more than once, it was thought by the friends that he must sink, without immediate relief; indeed, the prostration produced by paroxysms of pain was not unfrequently extreme.

The disease lasted for such a length of time, and without abatement, that I was led, at different times, to try very different remedies. In the first place, venesection, cathartics, scarification, and cupping, counter-irritants, emetics, &c.; all of which afforded but little, or at most temporary relief. Anodynes were administered without measure, as the only means of making his condition sufferable. He continued in this state about four weeks, during which time he became very much emaciated, and the friends and myself began to believe death to be inevitable; when he voided per anum, a portion of intestine from twelve to sixteen inches in length, either in one or two pieces: it was in two pieces when I first saw it, but it may have been torn into two by persons who had been previously examining it. The part which I exhibited to the Society, and still have in my possession, is twelve inches long; the other part, which was lost during the cleaning and washing, was supposed, by those who saw it with myself, to be not less than four inches long; so that the whole would vary but little from sixteen inches.

The portion passed is small intestine, having all its characteristics well marked. It is not, neither was it, as I believe, a continuous tube, in form of natural intestine, but is divided in its whole length; its edges being uneven, rough, and jagged, its mucous surface in spots, dotted over, and in other places almost covered with small, dark, granular particles, being hard and resembling grains of sand, except in color; there are also two or three patches, from half an inch to an inch in diameter, in which the entire coats of the intestine are changed into a dark mahogany-colored substance, not dissimilar to thin turtle-shell either in hardness or appearance. A considerable part of the intestine presents a healthy aspect, except at its sloughed edges.

From the time of the passage of this portion of intestine, or for two or three days previous, the patient convalesced very gradually; suffering still more or less pain, yet much mitigated. His recovery was slow and tedious, but his general health (and about eighteen months have now elapsed since the attack) is about or nearly the same as previous to his illness. He now does, and has for the past year, performed the usual work of a day laborer; being better able to endure the ordinary moderate exercise of common work out of doors, than confinement to his trade on the bench, which increases the pain in his side. The peculiarity of the case consists in its not being marked by the usual diagnostic systems of Intussusception; and it is also remarkable, as I conceive, on account of its favorable termination. The attack neither commenced with, nor was it during its whole course attended with vomiting, unless the emesis was the effect of medicine; neither was there obstinate constipation of the bowels, for cathartics operated freely and kindly, without unusual pain, or difficulty, from the beginning to the termination of the disease. Nor were there any symptoms, at any time, which led me to suspect the true state of the intestines, if I am correct in placing it under the head of Invaginated Intestine, or Intussusception.

ART. VII.—*Case of Gunshot wound, attended with secondary hemorrhage, in which both carotid arteries were tied at an interval of four and a half days.* By JOHN ELLIS, M.D., of Grand Rapids, Michigan.

Grand Rapids, Michigan, June 18th, 1845.

MR. EDITOR:—Theories and speculations in our profession are fast giving way to facts. Diseases which were once considered incurable are now cured, and operations which were once regarded as impracticable, are now performed with confidence and safety. Some of these improvements have been derived from accident, and some by experiment. Whenever an important case has been treated by uncommon remedies, with more than ordinary success, or where a surgical operation has been performed, which has hitherto been regarded as impracticable, successfully, or even without success, it becomes the duty of the practitioner to report the same to the profession, that it may stand as a beacon, or that it may add one to the mass, from which we are to deduce practical conclusions. According to the light which I now possess, I am led to suppose that the following case is one which may be of service to the profession; therefore, I feel it my duty to report the same, and shall cheerfully leave for you to decide whether it is worthy of notice or not. I think I have seen cases reported where both carotids have been ligatured, within as short a time, successfully, but am not certain. We can find but two instances recorded in our libraries; in one case both were ligatured at the same time, and the patient died; in the other fourteen days apart, and the patient recovered.

Peltish Hill, aged 21, while setting a trap in the woods, October 21, 1844, twelve miles from this place, was mistaken for a bear by a companion, and received the contents of his rifle: the ball struck him near the centre, and immediately above the spine, of the scapula of the left side, passing out, after making a flesh wound of about two inches and a half, towards his neck, and after about the same space it entered his neck over the centre and posterior edge of the sterno-cleido-mastoid muscle, passing up through the centre of his tongue, and out of it to the right of the mesian line, struck the lateral incisor, cuspidatus, and bicuspidatus of the right side, knocked them out, and the alveolar process, external to them; passed then through the upper lip, leaving a ragged opening through it. I saw him a few hours after it was done, and found that he had lost but little blood. I brought the edges of the wound in his lip together with adhesive plaster and two or three sutures, and dressed the other wounds with cold application. He was suffering but little pain, but an entire inability to swallow even liquids, which appeared to be owing to the injury and swelling of his tongue. We prepared a litter, and had him brought to this place. Fearing secondary hemorrhage, I directed that he should be carefully watched night and day by two intelligent assistants, and directed them to compress the *carotids* and the orifice of the wound in case of hemorrhage. Very little inflammation followed, which was doubtless owing to his being deprived of food and drink for about three days, on account of his inability to swallow. At the end of three days, I introduced a flexible catheter into his œsophagus and injected some water and nourishment; the next day he was able to swallow with difficulty some liquids, and soon recovered the power. The seventh day, during the night, I was sent for, to see my patient; hemorrhage from the wound in the tongue had taken place, but was readily subdued by compressing the carotid of the left side, and the orifices of the wound; upon removing the pressure, no bleeding returned. The following night I was sent for, and was accompanied by Dr. Platt. My patient had lost considerable blood, and it had been with difficulty restrained until we arrived, by pressure, which caused him considerable pain. We placed him upon a table, and with the assistance of Dr. Platt and a student, I ligatured the left carotid artery, below the omohyoideus muscle; an operation attended with a good deal of difficulty, owing to the swollen state of the parts, the necessity of keeping up pressure, the bad position of the parts owing to the necessity of keeping the mouth in a certain position to prevent his being strangled by the blood, and the necessity of operating by candle light. When we arrived at the common sheath, we found the *descendens noni* in its usual place; we drew it to one side, and upon opening the sheath came in contact with a large nerve, even larger than what I have been accustomed to see in the par vagum, in the dissecting room; we supposed it to be this nerve, and drew it to one side, as it was directly in front of the artery; as I passed the needle, I separated the artery and vein a little, but saw no appearance of the nerve in its usual place. No unpleasant symptoms followed the tightening of the ligature save a slight coldness of that side of his face and an occasional throbbing pain beneath the sternum, and in the direction of the ligatured vessel. Our patient appeared to be doing well until the eleventh day from the accident, when he had a return of hemorrhage, which was readily subdued by pressing upon the right carotid and the two orifices of the wound. There was a slight pulsation in the left temporal artery, the first I had felt since the application of the ligature. There was a return of the hemorrhage during the night and several times the next forenoon. He could not endure pressure upon the right carotid for any length of time, and we had to depend upon pressure upon the two orifices of the wound, which caused a good deal of pain, especially in the direction of the ninth pair of nerves. He was becoming very restless under the pressure, and was very anxious to have us do something to relieve him. In consultation with Drs. Platt and Shepherd, of this place, we came to the conclusion that the only chance to save the patient, was to ligature either the lingual, or the carotid of the right side, and as we could not satisfy ourselves whether the hemorrhage was from the lingual of the right side, or from the unligatured end of the left carotid, together with the fact of there being a good deal of tumefaction under the angle of the jaw, so much as to prevent our feeling the corner of the os hyoides, we came to the conclusion to ligature the carotid. Accordingly, with the assistance of Drs. Platt and Shepherd, I applied a ligature to the right carotid, four and one half days from the time we ligatured the left. The operation was attended with no difficulty; the internal jugular vein overlapped the artery to some extent; the descendens noni and par vagum were found in their place. We passed two ligatures beneath the artery, and then tied one of them over a cork applied to the vessel. For convenience, we had him in the sitting posture during the operation; when we tightened the ligature, no disagreeable effects followed; no fainting; no bad feeling about the head; and all the perceptible change was a slight paleness, and a cessation of pulsation in both temporal arteries, and of the hemorrhage. In the course of the next hour, his pulse increased in frequency from 95 to 140, but soon came down to 110. No difficulty of breathing. The first ligature was cut over the cork and removed, the other tied, and the wound dressed with sutures and adhesive plaster. For the first twenty-four hours our patient remained comfortable, but at the end of that time a hacking cough and difficulty of breathing; pain in his chest and heaviness; pulse 120, rather full, for his reduced state. Took about 12 ounces of blood from his arm, and a few ounces by cupping, with but little if any *present* relief; gave a little of the tincture of belladonna for his cough. I saw my patient four or five hours after; he complained of feeling worse, more difficulty of breathing, and pain; pulse about the same. I put a drop of the *tincture of aconite* into a glass of water, and gave him a teaspoonful. Saw him about four hours after; he expressed himself as feeling better; breathing easier; pulse 110, and less full. I directed him a dose of the aconite whenever he felt a return of the difficulty of breathing, and the belladonna for his cough, and directed him to abstain from all fluids from the first of his difficult breathing. Under the above treatment, the difficulty of breathing subsided; pulse came down in a few days to 80; neither of the wounds healed by first intention, but soon commenced discharging a healthy looking pus.

The ligature from the left carotid came away on the 17th day, and that from the right on the 14th from its application. The wound on the left side continued to discharge for several weeks, when the portion of the artery between the ligature and wound sloughed, and came away in three pieces at different times. The last portion about one inch in length, I have now in my possession. The young man now enjoys comfortable health, and is attending to business. No perceptible pulsation can be felt in either temporal artery.

There are several reasons which make the above case very interesting. It shows the comparative safety with which both carotids can be ligatured, so far as the brain is concerned, and the danger of pulmonary congestion. It shows with what rapidity the anastamosing branches of the opposite vessel supply blood enough to give rise to pulsation in the temporal artery, and of course the danger of hemorrhage from the unligatured end of the artery, where it is not possible to ligature both ends of the wounded vessel.

Art. VIII.—*A Case of Osteo-Sarcoma of the Lower Jaw successfully treated by Iodine.* By Jacob D. Stryker, M.D., of New Town, L. I. [Communicated by J. P. Garrish, M.D., N. Y.]

In May, 1838, I was called to see a son of David Covert, aged six years, with a tumor the size of a hen's egg encircling the lower jaw, between the symphysis of the chin and the angle of the jaw. It protruded more internally than externally, though it considerably disfigured the appearance, and plainly attracted the attention. It was solid and incompressible to the touch; it was virtually a bony tumor, and was what the profession understands by *Osteo-Sarcoma.* I was anxious to obtain some clue if possible to the difficulty in question, and I gathered from the parents, that two or three weeks previous to the appearance of the swelling, the boy, in jumping from step to step of a stairs, had fallen half a dozen feet or more on his face, though he sustained no serious injury, he complained at the time of considerable pain in the lower jaw. The patient had been under the care of Dr. Silas L. Condict in 1837, then a resident of Newtown. Shortly after my treatment had commenced of Iodine internally and externally, he saw Dr. Reese of New York, who agreed in opinion as it regards the nature of the disease, and considered the case rather as a surgical than a medical one. The father next consulted an eminent surgeon of New York city, Dr. J. Kearney Rodgers, who, after a close examination of the case, came to the conclusion that an operation was called for; although difficult and painful, yet the natural constitution being good, and the patient such a perfect specimen of health, the removal of the jaw bone between the symphysis of the chin and the angle of the jaw would, he thought, be well sustained. At the urgent solicitations of his friends he, as a last resort, took the boy to Dr. Beech, author of the "American Practice," who recommended an application to the part, it is presumed, as an apology for doing something, but it was discontinued after the second trial on account of the excessive pain it occasioned. The patient then came back to my hands, and I commenced the treatment with 10 grains of Sub. Mur. Hyd., to be followed by 2 ounces of Sulph. Mag. The next day I gave six drops of the Tinct. of Iodine three times a day, and applied a blister over the tumor; after it had well drawn, I dressed it with an ointment of Hydriodate of Potassa (1 dram to the ounce of lard). This treatment I pursued for a month with the exception of giving some mild purgative occasionally, as the Sulph. Magnesia. I then left off the treatment internally for two weeks, but continued the ointment. At the expiration of that time I substituted for the Tinct. of Iodine, the Hydriodate of Potash, 36 grains to the ounce of water; of this I gave 10 drops, three times a day, and the Iodine ointment was applied to the tumor. This treatment was pursued for six weeks, except the Iodine ointment, which produced so much irritation at the end of two weeks, that I fell back to the ointment of Hydriodate of Potash. I then discontinued the Hydriodate of Potash for a week, gave a dose of Sub. Mur. Hyd., followed by Sulph. Mag., and commenced with the Hydriodate of Potash internally and externally. The treatment was continued altogether for nine months, with the exception of a week's intermission occasionally; at the expiration of that time not a vestige of the disease remained.

The origin of Osteo-Sarcoma is veiled in obscurity. It appears sometimes as a hereditary disease, for it has attacked a number of individuals of the same family. It has been considered a cancerous affection of the bony tissue, and as such, may give rise to all the consequences that frequently result from a similar disease of the soft parts. It is not uncommon, after patients have submitted to severe operations, for the disease to fall upon some internal organ, and destroy life. How far Scrofula can be considered as giving rise to, or as connected with, Osteo-Sarcoma, as it is known to be with some other affections of the bones, remains to be determined, yet, the success attending this case, which is the treatment that has been generally found so efficacious in Scrofula, affords some grounds at least for analogy. I have presented this case, as one of considerable interest, from the fact that the cure is permanent, and that more than six years have elapsed and no marks are visible that so formidable a disease as Osteo-Sarcoma has been successfully encountered. The nature of the disease might with propriety be called in question, did it rest upon the authority of an individual; but if in a multitude of counsellors there is wisdom, considerable weight must be accorded to the opinions of those who always have and always will command respect. It is to be regretted, that Medical as well as Surgical cures are so hastily blazoned to the world as successful, when time, the great purifier and corrector of error, discloses a different tale. This case is important, as it goes to show that a truly difficult and painful operation can sometimes be dispensed with, and for the benefit of poor suffering humanity, we say try Iodine first, the knife last.

Art. IX.—*Case of Hydrophobia.* Communicated by George A. Smith, of Texas, Student of Medicine.

In the fall of 1842 I was invited by Dr. John R. Fraser to visit with him a man, belonging in Fort Pickering, but at that time in Memphis, who was reported to have hydrophobia. One of his fingers had been bitten some six or seven weeks previously by a dog said to have been mad. The wound had healed—he had been in good health since, and nothing had occurred to lead one to suppose that ill effects would arise from it, until the day previous to the one on which I saw him. On this day he was observed by one of his comrades to shun the water remaining in the streets from a shower of rain which had fallen during the fore part of the day.

Early on Sunday morning he had sent for some of the physicians of Memphis. I first saw him about 11, A. M., of that day. When I arrived, everything within the range of medicine, which was supposed to have any effect on this malady had been given him—opium, acetate of morphia, belladonna, &c., &c., in large doses, without producing any apparent favorable effect. When I entered the room he was lying quietly on his back. His pulse was if anything a little fuller and stronger than in health—tongue natural—pupil was much dilated when at rest, but on the supervention of a spasm, would contract with remarkable quickness. His breathing was a little more hurried than natural,—there was no pain or soreness in his abdomen.

Several times he attempted to drink at the request of those present, but could never succeed—the attempt always causing a return of the spasm. The pouring of water into a tumbler in another room by one of the gentlemen, although not heard by those present, threw him into violent convulsions. The current of air caused by the opening and shutting of the doors also produced spasms. I remained with him some hours, and saw him again at night—at which time the spasms were more frequent. He was fully conscious of his situation, but his mind was free and undisturbed by the knowledge of his certain doom. His equanimity would have been creditable to a stoic. He died about 3, A. M., the next day during a severe rain. The persons who were with him at the time said that the pattering of the rain on the roof of the house threw him into violent convulsions, during which death occurred.

ART. X.—*A Case of Amaurosis successfully treated, with remarks on the Disease.* By A. B. SHIPMAN, M.D., of Cortlandville, N. Y., Professor of Surgery, Laporte University, Ind.

AMAUROSIS is, according to my experience, a very intractable disease. The cause is often obscure, and the treatment promising but little benefit except in those cases, in nervous and hysterical patients, where it comes on suddenly, and leaves equally so. In the month of April, 1844, I received a letter from Thomas Burt, of Willett, in this county, respecting the case of his child, which I will give in his own words:—"Willett, April 16, 1844, Doctor Shipman, Dear Sir, I have a child which is totally blind; he is now ten months old, he was taken sick last winter, was then five months old; he had a severe cold and it seemed to settle in his head. He was very sick, so much so, that the physician who attended him thought he would not live. In the course of his sickness we discovered something ailed his eyes; they twitched often and badly, he rolled them up in his head, sometimes entirely under the lid; after he recovered from his sickness he was cross-eyed for some time. We do not think he has seen anything since. We cannot attract his attention in any way. We do not believe he can discern light from darkness. His ears have discharged a great deal of matter since his sickness. He now enjoys tolerable good health; he squints his eyelids often, and shakes his head frequently. I have taken him to a great many physicians who pronounce his case as incurable. I wish your opinion whether you think he can be helped. If you think you can do anything for him, I will bring him to you; please write if you think it best to take him to the Eye Infirmary. We feel very anxious, as he is our only child. Thomas Burt."

On the 29th of April the parents brought the child to me. The child was of the ordinary size. Eyes black—pupils much dilated—constant rolling of the eye-ball, and occasional shaking of the head; there was but little lustre to the eye. Discharge from ears of a frothy character. The exhibition of shining and gaudy objects failed to attract the least attention, and a candle held close to the eyes, was apparently not recognized. The pupils did not contract with the strongest light. I found that he had diarrhœa of several months standing, but was in other respects in good health. My first prescription was *Blue Mass.* 1 gr. *Creta prep.* 3 grs., to be taken every night. *Compound Syrup of Rhei*, a teaspoonful once a day. *Unguentum of tart Ant.*, to be rubbed behind the ears every night, until a copious eruption was produced.

May 23d, saw the child again, had taken the prescription. The bowels regular, and an extensive eruption had come on the application of the ointment, which had spread over the whole scalp and down the neck—was feverish and very irritable, probably from the extent of the eruption. No change in the appearance of the eye. ℞ *Strychnia*, 2 grs. *Alcohol*, ℥ss; 2 gtt., three times a day; to apply the ointment if the eruption heals.

July 3rd, has taken the prescription. There is less rolling of the eyes, and the parents imagine he discerns some objects; the eruption is still kept up; ears have nearly left off discharging—continue the use of the *Strychnia*, increased to 5 gtt. three times a day.

September 12th—Child evidently sees. His notice can be attracted by exhibiting toys, which he catches at. The rolling of the eye is subsiding; continue the same prescription with an increase of the *Strychnia*, to 6 gtt., three times a day.

October 1st—The child runs about the house—avoids running against objects, and the sight is fast improving—is getting fat, and his eyes steady. The iris is now sensible to the stimulus of light, and there is an increase in the size of the globes, which I think were rather smaller than natural when first seen.

November 16th—Has taken medicine up to this time, but the *Antimonial ointment* was discontinued a month since, and the eruption healed; has taken the *Strychnia* up to this date. The quantity in all is 10 grs., or about 2 grs. per month. The cure is now perfect, and the mother has the felicity of seeing her child look up into her face, with a smiling and intelligent countenance.

What was the cause of the Amaurosis in this case? is the first question which naturally presents itself. And what was the curative agent—the counter-irritation, the Strychnia, or both? To the first question, My opinion is, that the disease was effusion of serum or lymph, or some deposit in the brain; the product of inflammation. That the counter-irritation was very beneficial in commencing the cure; what agency the Strychnia had in the cure I am not positive. I have often employed it in cases of Amaurosis, but with very doubtful success, which is the most we can hope from any remedy when the disease is involved in obscurity. In several instances I have applied it to the raw surface of a blister on the temple, but have generally been disappointed in its affording relief.

Some four years since a lady sought my advice from a neighboring county, for a defect of vision of three years standing. She was about fifty years of age, of fine personal appearance, but was much concerned about her eye-sight, which had been gradually failing her for three years. She saw *Muscæ Volitantes*, and she could not distinguish the countenances of her most intimate acquaintances. The pupils were dilated to the greatest extent, and there was a cataract in one of them. She gave me this history. That she applied to a surgeon a year before, who told her that she had Amaurosis, and that there was little prospect of a cure. Her son, a young surgeon, living in a neighboring town, consulted a friend of his, a physician, who told him that it was cataract, and must be operated on; he visited the patient and performed the operation of couching!!

On taking off the bandage a week after the operation, instead of the large black pupil, there was a white opaque body in it, which completely shut out light from that eye. There was now for a certainty *Cataract.* She was anxious now for an operation, as the unnatural appearance in the eye greatly annoyed her; I attempted to dissuade her, but to no purpose—have an operation she would. Accordingly I agreed to perform the operation. But in attempting to dilate the pupil with Belladonna, I found adhesions of the iris to the lens; but with the needle the adhesions were partially broken up, and I repeated the operation three times in the course of a year, when absorption of the lens and capsule took place, and the patient regained nearly as good sight as she had previous to the first operation which caused the cataract. Dr. Van Dusen, of Tully, Onondaga Co., assisted me in the operation each time, and saw the case and examined the eyes before this novel operation was performed for Amaurosis. I state this case to show that Amaurosis has been mistaken for cataract by a man who was surgeon enough to operate.

ART. XI.—*Remarks on Rheumatism and Syphilis, with Tabular Statements.* By SAMUEL BOYD, M.D., Resident Physician of the Seaman's Retreat Hospital, Staten Island, N. Y.

RHEUMATISM, in every form, is constantly met with, and affords perhaps the most obstinate class of disease, to those engaged in practice among those whose business exposes them to atmospheric vicissitudes and wet. It assumes all its various forms of muscular, capsular, and those attended with and without effusion, either within the cellular or the fibrous tissue, and arises from the sudden changes of temperature to which the surface of the body is exposed, aided by the predisposing susceptibility derived from the use and abuse of mercury and the irregularities of life. The pathology of the disease is certainly yet involved in much obscurity, but if we consider carefully the causes enumerated, and their effects upon the functions of the great eliminating organs, the liver and the kidneys, that view which assigns the presence of an excess of urea in the blood as their cause, seems to my mind the most probable. If so, it is a fact easily tested by chemical scrutiny, and would confirm my conclusions that most reliance is to be placed upon the use of the remedies which I have found most successful, and the results of which I will state. Many of the remedies recommended in this disease have served only to amuse the patient, while nature herself has accomplished the cure.

In acute or inflammatory rheumatism, accompanied with great pain, effusion within the cellular tissue, and inability of motion from sensibility of the muscles, and attended with general excitement, heat of skin, quickness of pulse, dryness of tongue, and suffusion of countenance, I have found the use of nitrate of potash very successful, acting alike on the skin, bowels and kidneys, requiring only occasionally the use of Dover's Powder, for the production of sleep, for its aid. With this remedy were treated the following six cases of acute rheumatism, attended in all with the above symptoms:

E. F., ætatis 31, of three days' existence. Dose ʒss. six times, gradually increased to ʒij. eight times a day, given in O.ss. of Decoc. Lini.
C. B., ætatis 30, of three days' existence—treatment same.
J. N. S., ætatis 21, “ “ “ “ “
A. J., ætatis 30, “ “ “ “ “
C. F. H., ætatis 25, “ “ “ “ “
P. G., ætatis 22, “ “ “ “ “

In all these cases the doses were gradually increased daily, and in some, without the aid of any other means, fully accomplished the cure. In one or two, the warm bath was added. In the last a relapse occurred, and is now under other treatment. In all, prostrating effects followed the remedy, but complete relief from pain and tumefaction was the result in every instance. The mean duration of treatment was seven days. Diet low.

In that form of the complaint when the general excitement is less and the effusion apparently within the capsule of the joints, the *vinum colchici*, made from the seeds, in the dose of twenty-five drops three times a day, increased to thirty-five drops, has been successful in twelve cases, aided by Dover's Powder at night. Diet low.

When the pain seems confined to the fibrous tissues, the tendons and ligaments of the joints, and the periosteal surface of the long bones, occurring in constitutions attenuated and feeble from the use of mercury, or dissipated habits of life, *hydriodate of potassa* in doses of eight grains twice or thrice a day, with the application of blisters to the seat of pain, removed all complaint, and strengthened and improved the general condition of the patient. Fifty-five cases have been cured in this manner. The mean duration of treatment in this way and by that of colchicum, is not given, because in this institution the patients are allowed to remain until they feel themselves able to return to their employment. Generally and to this end, as well as their relief in this latter form of rheumatism, much credit is due to the abundant diet allowed, and the general regimen of the hospital.

If the method of action of these remedies is considered, first, that of the nitrate of potash, as acting directly upon the kidneys and skin, the colchicum on the kidneys, and rarely producing relief, until by apparent stimulation of the capillaries of the mucous surface of the intestinal tube, as seen in the frequent discharges, and the hydriodate of potash by its tonic and absorbent properties, derived from the iodine and antacid of the alkali, and when we consider in conjunction, the prevalent opinion that *acidity* in the primæ viæ is productive of rheumatic attacks, we have some reason for the adoption of the view, that an excess of *urea* in the blood is the most frequent cause, and that the above remedies will most often be found useful.

Syphilis.—That inoculation in syphilis is a most useful test in reference to the propriety of the use of mercury, no one conversant with the diseases of the organs of generation, arising from impure connection, will be disposed to deny. Those who have witnessed the obscurity attendant upon these affections, will feel willing to acknowledge the benefit under which we are to M. Ricord for its introduction into practice, especially those who are acquainted with the poisonous effects of mercury, injudiciously and unnecessarily used. With the conviction that where the condition will allow the use of mercury, no patient affected with the virus of syphilis is safe from its continuance in the system, I would always advise and adopt its use after the evidence afforded by the production of a specific sore from the matter of either chancre or bubo, and in corroboration I subjoin the outlines of thirty-eight cases, premising that in nearly all, sufficient time elapsed for the appearance of secondary symptoms, during the period of treatment, and in none did they occur.

August 7, 1845.—Thomas Williams, ætatis 28, born in New Jersey, admitted for an abscess on the dorsum penis; was exposed a week since; the swelling with pain commenced two days ago. *Treatment.*—The abscess was poulticed and broke, when it immediately assumed a phagedenic character, involving and spreading for the extent of an inch, through all the cellular tissue, down to the corpus spongiosum; has the ash-colored bottom and elevated edges of a primary syphilitic sore. On the tenth day after exposure, August 11th, some of the pus from the bottom of the sore was inserted into the left thigh. On the third day after insertion, the sore on the thigh presented a slightly inflamed areola; on the 6th, decided inflammatory action was established with the formation of a pustule, and a disposition to scab. On the 8th the scab fell off, and the sore possessed an excavated base of yellowish grey color. On the 10th the sore presented every appearance of a chancre, and pill. hydrargyri gr. 5., *bis in die*, were given. On the 15th, the sore on the penis assumed a healthy granulating surface; that on the thigh continuing the same. On the seventeenth day after insertion, the base of the sore on the thigh commenced to granulate, losing the ash color which, until then, it had retained. The pills were continued without any local application other than lint wet with water until slight mercurialism occurred, and the sores were entirely healed, leaving no induration, when decoction of sarsaparilla, ℈ij., with sulphur sublimated ʒij. daily, were given for two weeks, and he was discharged, having no evidence of syphilis or mercury present.

OTHER CASES IN WHICH THE TEST WAS APPLIED.

Name.	*Admission.*	*Symptom.*	*Inoculation.*	*Result.*	*Mercury.*	*Discharge.*	*Time under treatment*
N. W.	Oct 4	sore on penis	from sore	none	not given	Dec 9	67 days
J. W.	5	do	do	do	do	Nov 11	37 do
J. T.		bubo	from bubo	successful	given	Dec 23	80 do
A. A.	Nov 20	do	do	none	not given	Jan 13	54 do
W. D.	21	sore on penis	from sore	successful	given	13	53 do
M. C.	Dec 6	sore and bubo	do	do	do	25	50 do
J. S.	17	bubo	from bubo	do	do	Feb 15	60 do
G. T.	23	sores on penis	from sore	none	not given	Jan 14	22 do
T. J.	28	do	do	do	do	16	19 do
W. S.	Jan 4	do	do	do	do	Feb 22	49 do
S. E.	9	do and bubo	from sore	successful	given	April 23	90 do
T. L. H.	14	sore on penis	do	none	not given	Jan 25	11 do
W. B.	20	do	do	do	do	Feb 17	28 do
J. J.	20	do	do	successful	given	April 19	58 do
J. P.	20	do	do	none	not given	Feb 3	14 do
C. N.	21	bubo	from bubo	successful	given	17	28 do
W. C.	22	do	do	do	do	22	31 do
W. J. F.	23	do	do	none	not given	21	29 do
G. R.	23	sore on penis	from sore	successful	given	19	27 do
H. P	27	do	do	do	do	March 21	53 do
J. C.	28	sore and bubo	do	do	do	31	62 do
C. M.	Feb 5	sore on penis	/ do	do	do	April 10	64 do
G. T.	10	do	do	do	do	Feb 13	3 do*
J. T. C.	12	do	do	do	do	March 5	21 do
E. G.	12	do	do	none	not given	Feb 22	10 do
G. H.	20	bubo and sore	from bubo	none	do	March 24	32 do
H. W.	24	bubo and sore	from sore	successful	given	May 3	9 do
U. M.	26	bubo and sore	from bubo	do	given	April 23	56 do
J. P. W.	March 1	sore on penis	from sore	none	not given	March 31	30 do
W. A.	17	do	do	do	do	April 21	35 do
	28	buboes	from buboes	do	do	14	17 do

* Discharged as disorderly.

As an universal truth it may be observed that neither will the inoculation prove successful, nor should mercury at any time be given, without using means for the restoration of the general health, and this should be immediately sought wheresoever it be found impaired by disease, habit of life, or remedy. The mean duration of treatment may be seen, as above, to have been about forty-eight days for those to whom mercury was given, and twenty-nine days where the inoculation proved unsuccessful, and the cases were not deemed syphilitic. In conclusion I would remark that from my experience in the above and other cases not enumerated because yet under treatment, and from my observation of the certain recurrence of the disease where mercury has not been used, that previous to its use the test should always be adopted, and when successful, mercury ought never to be omitted when the powers of the system allow its exhibition. The inoculated sore invariably heals "pari passu" with the original disease.

Seaman's Retreat Hospital, Staten Island, April 30, 1845.

PART SECOND.

Critical Analysis.

ART. XII.—*Caloric; its Mechanical, Chemical, and Vital Agencies in the Phenomena of Nature.* By SAMUEL L. METCALFE, M. D. London: 1843. 2 vols. pp. 1100.

To the general reader, the above title presents an imperfect idea of Dr. Metcalfe's work, which embraces a new system of Natural Philosophy, Physiology, Pathology, and Therapeutics. Yet it appears evidently not to have been the object of the author to make war against any theories which have been established by sound induction, from a sufficient number of well ascertained facts, but to supply what is acknowledged to be deficient, to correct what is erroneous, and to reduce the phenomena of Nature to more comprehensive principles, that shall connect, simplify and explain, what has been hitherto regarded as involved in profound obscurity. In the prosecution of this arduous enterprise, he has devoted the last twelve years; the greater part of which time he has spent in the Libraries and Lecture rooms of Europe,—with a view of ascertaining all that was known, and to investigate everything within the compass of possibility. The result has been the production of a work which is characterized by the translator of Dumas and Boussingault's Organic Chemistry, as full of original, profound, and comprehensive views, on every branch of Physical and Medical Science. The Editor of the *London Medical Gazette*, who has reviewed it in three separate articles, also speaks of the work as one, "the like of which comes from the press only at rare and distant intervals,—a work, indeed, of sublime scope, and, rightly taken, of the noblest tendency. It is the truest specimen, and most successful achievement of that which the late Earl of Bridgewater had in view, when he left a sum of money for the purchase and publication of a series of Treatises illustrative of the wisdom and goodness of God in creation. But it has the great advantage over any treatise which could be obtained under such circumstances, that it is not 'written to order.' It is the spontaneous effusion of the gifted mind, brimful of knowledge, and tinctured with the hallowed fire of poetry."—(*June* 21, 1844.)—And notwithstanding the revolutionary tendency of the work in almost every department of science, the very able reviewer has given his sanction to all its leading doctrines. In his first article on the work, he observes:—"It bears the unquestionable stamp of genius, and carries with it, at the same time, evidence of learning various and extensive, and of such laborious research as can be successfully achieved only by minds of the noblest order in pursuit of sacred truth. And truly, we make bold to say, that we have never met with an effort so sustained, and we add with confidence, so successfully made, to raise the veil from the shrouded statue of Isis."—(*March* 17, 1844, p. 229.)—And although the British and Foreign Medical Review opposes, as we think, unsuccessfully, some of the author's views, it declares that "the impartial and intelligent reader can feel no doubt that the foundation of Dr. Metcalfe's system embodies a vast extent of valuable and undoubted truths."—(*July*, 1844.)

With such recommendations, coming, as they do, from the most respectable journals of Great Britain, it is impossible that men of science in this country can overlook the claims of Dr. Metcalfe's work to a fair examination. As it abounds with new and original views that have been regarded by competent judges as of the very highest importance to the theory and practice of Medicine, we shall present our readers with a brief outline of them, generally in regard to the nature and agency of Caloric, as connected with all the operations of nature, but more particularly those of the animal economy. It is now admitted by many of the most distinguished writers on Pathology, that the principal reason why we have never, as yet, had any clear and satisfactory explanation of what constitutes *fever*, is, that so little has been known with certainty in regard to the origin of animal heat, in health; and above all, what office it performs in the economy of living bodies. In an article on the subject by the late Dr. Edwards, contained in the "Cyclopedia of Anatomy and Physiology," he tells us that "Physiologists have not been able to discover the cause of animal heat, for the same reason that Natural Philosophers have not yet discovered how heat is produced in the inorganic world." In fact, so imperfect has been the state of knowledge on this important science, that from the times of Bacon, Boyle, Newton, and Hooke, down to the present day, it has been a matter of controversy whether Caloric be a material essence as maintained by all the ancient philosophers, or nothing of itself, but the mere effect of motion and vibration among the particles of ponderable matter. The latter theory was advanced by Bacon in the *Novum Organum*, and in his treatise, "*De Forma Calidi.*" But Dr. Metcalfe has shown that the opposite theory was taught by Bacon in his Natural History, and in his Essay on Life and Death; in which he asserts that "there is in every tangible body, a *spirit* or *body pneumatical*, which fills the pores of all gross bodies; that it is not some virtue, or action, or trifle, but a real and *quantitative substance*, though rare, invisible, and *without weight.*" He adds, that it is the *cause of evaporation*,—an effect which Dr. Metcalfe observes, is predicable of Caloric alone; which the Greeks called *Pneuma*, the prototype of Bacon's *spirit* or *pneumatical body*. In support of this view, the author quotes a passage from the Treatise of Hippocrates on First Principles, in which he declares that "*heat is spirit;* θερμον εστι το πνευμα." (περι Αρχων, I., 7.) Dr. Metcalfe has also shown that the assertion of Newton at the close of his Optics, that "heat consists in a vibratory motion among the particles of bodies," is equally contradicted in the same work, as also at the close of the *Principia*, and in a letter addressed to Boyle in 1768, in which he speaks of "an exceedingly subtile and elastic substance, as diffused through all places; which is the cause of cohesive capillary attraction, and of the force by which menstrua pervade and dissolve solid bodies, which separates and keeps the particles of the atmosphere at a distance from one another," &c. Yet he observes that he knows not what the æther is, and that "we have not that sufficiency of experiments which are requisite to an accurate determination of the laws by which this subtile *spirit* operates."—(Close of the "Principia.") But, says Dr. Metcalfe, "if the *Aether* be the cause of solution, and of the elastic force of the atmosphere, it is manifestly identical with Caloric as in fact the etymology of the word sufficiently proves; for it is now well known to the learned, that *Aether* is derived from two Phœnician words, (which are also Egyptian and Hebrew), *Aith*, the sun, and *Ur*, Fire, signifying the Solar Fire. And Hippocrates says, that what the ancients called *Aether*, the Greeks called θερμον.

With such facts in view, we are inclined to admit with Dr. Metcalfe, that Bacon and Newton had no settled opinions in regard to the nature of Caloric, and that they were, in reality, advocates of the material theory, without, perhaps, knowing it. Pursuing this rigorous mode of investigation, the author has shown that in all ages, and among all nations of the civilized world, men have had nearly the same fundamental ideas in regard to the nature and agency of Caloric, or elementary fire, by whatever names it has been designated; that among the early Hindoos, it was called *Indra*, *Iswara*, *Narayana*, *Om* or *Aum*, *Brahmá*, *Vishnu*, and *Siva*, to represent its formative, preserving and destroying agency, in modifying the conditions of inert matter; that among the ancient Egyptians it was also called *Neph*, *Pthah*, *Khem*, *Osiris*, *&c.*, merely different names of the solar fire, which was supposed to actuate the universe; while the passive matter, out of which everything is formed, was personified as *Isis*. The same division of all things into active and passive, or spirit and matter, prevailed among the Chaldeans, Phœnicians, Chinese, and other ancient nations of the world. In short, Dr. Metcalfe has shown that the πνευμα, like the ψυχὴ Κοσμου of the Greeks, the *Anima mundi* of the Romans, the *Archeus* of Paracelsus, the *materia subtilis* of Descartes, the *pneumatical body* of Bacon, the unknown *Aether* or *Spirit* of Newton, the *phlogiston* of Beccher and Stahl, the *nervous fluid* of Willis, Boerhaave, and Cullen, the *materia vitæ* of Hunter, the *spirit* of *animation* of Darwin, and the *electric fluid* of modern times, are only so many different names of one and the same active principle that produces all the transformations of matter, in accordance with unchangeable laws, and under the guidance of Eternal Wisdom,—a principle familiarly known under the name of Heat or Caloric. Perceiving the necessity of settling the question whether Caloric be a distinct essence, or a mere condition of other matter, he makes it a cardinal point of his inquiries; and he maintains that the same reasoning on which is founded all belief in the material existence of the outward universe applies equally to Caloric; that no sophistry can shake the common sense belief of mankind, that whatever operates in a sensible manner upon material organs, must be a material essence, however refined,—for the plain reason that "there can be no virtue without substance," as observed by Newton; "while it is obvious that nothing else in nature operates so powerfully on the sense of touch as Caloric; consequently, that when men deny its materiality, they reject the evidence of their senses, subvert the foundation of all knowledge, and pave the way to universal skepticism." That Caloric does not consist in mere motion or vibration among the particles of ponderable matter, he contends, for the following reasons:—

1. That it may be added to, and subtracted from, other bodies, and measured with mathematical precision, as all good thermometers demonstrate.

2. That it augments the volume of bodies, which are again reduced in bulk by its abstraction.

3. That it modifies the forms, properties, and conditions of ponderable matter, in an endless variety of ways.

4. That it passes by radiation through the most perfect vacuum that can be formed by means of the air pump, in which it produces the same effects on the thermometer as in the atmosphere.

5. That it exerts mechanical and chemical forces, which nothing can restrain, as in volcanoes, the explosion of gunpowder and other fulminating compounds.

6. That it operates in a sensible manner on the nervous system, producing intense pain, and disorganization of the tissues, when in excess; to which he adds: " But if Caloric were a mere property or quality, how could it be taken from one body and added to another? Or, if it augment the volume of other bodies, must it not itself have volume, occupy space, and therefore have extension, which is a fundamental property of matter? Would it not be mere jargon to speak of the radiation, reflexion, convection, and conduction of a mere quality or immaterial property? Or, if Caloric were only the effect of vibratory motion among the particles of ponderable matter, how could it radiate from hot bodies through a vacuum without the simultaneous transition of the vibratory particles? Whereas it is certain that when metals are heated to any temperature below the point of ignition, they give off Caloric freely, like boiling water, without any sensible loss of ponderable matter." (Vol. i., pp. 6 and 7.)

The author has also shown by indisputable evidence, that Caloric is never disengaged by pressure, friction, or percussion, except so long as bodies undergo condensation; consequently that the elevation of temperature produced by boring a cannon, does not prove that Heat is the mere effect of motion, as supposed by Count Rumford and others.

In regard to the juvenile experiments of Sir Humphrey Davy, who reported that he had melted nearly the whole of two pieces of ice by rubbing them together, Dr. Metcalfe replies that, " Davy did not describe the apparatus by which he produced the friction, the length of time it was continued, nor the temperature of the air in which it was made; and that, after repeating the experiment under the requisite conditions, scarcely any appreciable quantity of ice could be melted by friction." He also maintains that, as Davy afterwards spoke disparagingly of his own results, and did not adduce them in support of his views, in his later works, when treating on the nature of heat, they cannot be any longer regarded as worthy of confidence; especially because Davy admits in his Chemical Philosophy, that a piece of iron, made red hot by hammering, cannot be again heated in the same way, unless previously introduced into a fire. From which, Dr. Metcalfe thinks it evident, that caloric is not generated *de novo* by friction, but that it is merely forced out of the pores of bodies, like water from the pores of a sponge, and cannot be obtained by pressure, percussion, and friction from metals, &c., after they have been brought to the limit of condensation, unless previously submitted to the fire.

Having proved that Caloric is a material, though an exceedingly refined essence, the author proceeds to demonstrate that it is the primary physical cause of motion throughout nature; that, as every change in the temperature of bodies is attended with motion among their particles, and since caloric has the power of moving itself by radiation, and of generating motion among the particles of other matter, it must be essentially active in its nature. He then goes on to show that the laws of motion are resolvable into the laws of Caloric, which are announced in the following propositions:

1. That the activity, or moving power of all bodies is directly in proportion to the amount of Caloric around their particles, as illustrated in the effects of steam.
2. That the quantity of evaporation and rain, of chemical action, and vegetable growth, throughout the earth, is directly in proportion to the temperature of different latitudes, *ceteris paribus*, and diminishes from the tropical to the polar regions.
3. That the centrifugal force, by which planets are impelled through their orbits, is exactly in proportion to the heating power of the sun, and like that of gravitation, is inversely as the squares of the distance; for the plain mathematical reason that all ethereal emanations are necessarily diffused in the same ratio.
4. That the aggregate vital energy of animals during health, and the development of their organization, are exactly in proportion to the amount of Caloric they obtain from the atmosphere by respiration, and which combines with their tissues in a given time.
5. That Caloric is the active principle in light, whether radiated from the sun, or generated by ordinary combustion, friction, percussion, phosphorescence, or the electric discharge; and that it differs from light in this, that it may exist in a separate state; whereas, light cannot exist without the union of both Caloric and ponderable matter.
6. That in all their various forms or conditions, Caloric and electricity are mutually convertible into each other, and are therefore only modifications of one and the same principle.
7. That the directive power of the compass diminishes from the isothermal or magnetic equator, to the points of lowest mean temperature, which are the magnetic poles, where the needle will not traverse; and that all its periodical variations correspond with the annual, monthly, and diurnal variations of terrestrial temperature.
8. That the velocity with which planets are impelled through their orbits diminishes in proportion to their distance from the sun, in accordance with the law of Kepler, that the squares of the times of any two planets are to each other in the same proportion as the cubes of their mean distances from the sun; and corresponding with the law of Newton, that the centrifugal force, like that of gravity, varies inversely as the squares of the distance.

From the foregoing propositions, the intelligent reader will perceive, that Dr. Metcalfe has connected the laws of Kepler, Galileo, and Newton, with those of elementary Caloric, and resolved the whole into a more comprehensive generalization, which possesses the striking advantage of including the cause of motion. Nor is it possible to deny that the perfect harmony of this generalization, with all the best known phenomena of nature, and with what has been demonstrated by others, affords very strong evidence that he has achieved discoveries of the highest importance to science.

In every age of the civilized world, the cause of motion has been the fundamental problem of the learned—a problem which seems to have been better understood by the ancients than by modern philosophers, who have generally regarded it as the Sphinx's riddle. But our author has apparently shown that this problem is far less difficult than has generally been supposed. And his method of solving it is no less original than simple and convincing. He observes, for example, that under the ordinary pressure of the atmosphere, and at, or a little below the temperature of 32° F., the particles of water exist in the solid and apparently inactive state; but that if 140° of Caloric be added, their mobility is so far increased that they glide freely over one another, and assume the liquid form; that if more Caloric be added, their activity is still further augmented by every degree of temperature, up to the boiling point, when the whole is found to be in a state of rapid molecular motion: and that if at this stage of the experiment, the water be kept over a furnace until it has received about 1000° more of Caloric, the boiling liquid is converted into steam, the moving force of which is augmented by every addition of this essentially active principle, until it becomes irresistible, as in the earthquake or volcano; and that the same is true of all other bodies under like circumstances. If then it be a fact, says our author, that Caloric alone gives to the quiescent particles of ponderable matter powers of motion which they do not possess without it, while their mobility is augmented by every addition, and diminished by every abstraction of the igneous principle, it would seem to follow, that in the total absence of Caloric, if such a condition were possible, there could be no motion, and the universe of matter would be reduced to a state of perfect inertia. He adds: "here then is the foundation of all physical logic, and a key to the whole mechanism of nature. For as it is certain that all the changes and transformations of matter are the immediate effects of motion, it follows that a complete knowledge of its cause, and of the mode in which the cause operates, would lead to a perfect theory of Physics. And as the rudiments of matter could have no motion without Caloric, it is evident that they could neither approximate nor recede from one another; consequently, that attraction and repulsion are not ultimate principles of action, for which no reason can be assigned, as maintained by the Newtonians, but secondary effects of the prime mover, which determines all the contractions and expansions of matter."

Should philosophers fail in detecting any fallacy in the foregoing induction, they will of course be compelled to admit that the great problem of motion has been solved. Nor will they be surprised that Dr. Metcalfe should have expended so large a portion of his life in developing the mechanical, chemical, and vital laws of a principle, which, if his reasoning be just, seems to be the basis of all physical action, and a key to all the mysteries of nature. But before leaving this part of the subject, we must inform our readers that he resolves all the centrifugal and centripetal movements of matter into the universal law by which *Caloric repels its own particles, and attracts those of ponderable matter, with forces that vary inversely as the squares of the distance.* In certain proportions it causes the particles of other matter to separate, and determines the elasticity of all bodies; while in smaller proportions, the same agent forces them to unite, as in cohesion, chemical affinity, and the attraction of vitality. He shows that the force with which Caloric attracts and combines with the particles of gross bodies, is in proportion to the quantity of matter, *ceteris paribus*, and augments in proportion as they are deprived of it; which force is the cause of their cohesion and solidity. For example, ice has a stronger attraction for Caloric than water, and coheres with greater force, which augments with every reduction of temperature, and so of other bodies. On the other hand, it is because gases contain a large amount of Caloric (which repels its own particles), that they are maintained in the elastic state, and their atoms kept at their respective distances from one another. In short, by the idio-repulsive power of Caloric, it separates and decomposes all things,—by its attraction for ponderable matter, it unites and holds together all things. In like manner, by the radiating power of the sun, our author states that the centrifugal force of planets is maintained; while the returning tide of Caloric to the solar fountain whence it emanated, causes the equal and opposite force of gravity. Were it not for such a continual circulation of Caloric, the author contends that the temperature of the planetary spaces could not be stationary, but would be constantly rising (like that of a room with a fire in it, without a circulation of its heat), and thus alter the climate of the whole planetary system. As the reader might naturally infer, Dr. Metcalfe rejects the Newtonian hypothesis of a *vacuum*, which is at variance with Newton's own views of light, and of the ether, both of which the latter represented as filling the planetary spaces. And as Caloric is constantly radiated throughout the solar system, our author concludes that "there is no such thing as a perfect vacuum in nature, neither in the pores of bodies, nor in those widely extended pores of the universe termed the stellary spaces."—(Vol. I., p. 278)

For the vast array of facts, which the author has collected in support of his views, and the luminous manner in which they are separated from all existing hypotheses, we must refer our readers to the work itself, and proceed to exhibit a brief outline of his views on Animal Heat, as connected with the laws of life, health, and disease; to which the whole of the second volume, embracing 645 pages, is devoted. After commenting on the prevalent doctrine that life is a problem beyond the limits of the human mind to comprehend, he observes: "if there be any primary and efficient cause of vital force, it must be either a portion of the air we breathe or of the materials by which we are nourished; and if so, there is no good reason why it should be more mysterious than any of the other phenomena of nature." (P. 458.)

He adds: "that although the Book of Genesis seems not to have been intended to teach the principles of natural science, it announces two fundamental truths in physiology, viz: *the life-sustaining office of the lungs, and the vitality of the blood;* that, when it is said God "breathed into the nostrils of man the breath of life, and he became a living soul," we can understand only that man was created with breathing organs, for the purpose of obtaining life from the atmosphere; that among all enlightened nations, *to live*, and *to breathe*, are employed as synonymous phrases, and that they have represented the destruction of life by the shedding of blood." (P. 484.)

To those who maintain that "the phenomena of life are wholly removed from the logic of quantity, and that the object of philosophical inquiry ought to be, not what the vital principle is, but what it does," our author replies, that "if respiration be the source of animal life, the phenomena are resolvable into additions and subtractions of measurable elements; and it is because they have not been ascertained with numerical accuracy, that physiology has never been reduced to the character of an exact science; that it is the *opprobrium medicorum*, that 'no genuine physiological principle has been discovered,' as observed by the author of the History of the Inductive Sciences; and that, according to Magendie, 'the science of Pathology does not yet even exist.' But how," says Dr. Metcalfe, "can we know the best means of maintaining the functions of life in a healthy state, while ignorant of the physical cause on which they all depend? How can we adopt the best treatment of fever, inflammation, &c., without comprehending the true theory of animal heat, the mode in which it is obtained, and the office it performs in the economy of life?" He observes in another place: "if ever we shall be enabled to reduce the phenomena of life to the certainty of fixed principles, it must be accomplished by ascertaining the elementary composition of organized bodies, and the changes they undergo at every stage of their development,—what is added to our food during its conversion into chyme, chyle, and blood—what changes are effected on the atmosphere by respiration—what the blood receives, and what it loses, while passing through the lungs, and during its circulation through the systemic capillaries; above all, what enables it to excite the heart, and maintain the activity of all the functions. For, if all diseases are owing to some deviation from the natural state of living bodies, it is clearly impossible to comprehend the right method of their treatment, without knowing the conditions of healthy action. But if the principle of animal life be obtained from the atmosphere by breathing, it must be a *boná fide* constituent of the atmosphere, and not a hyperphysical something, incapable of being understood, as maintained by modern theorists, who have confounded the physical cause of life with mind, which is certainly not a material essence, since it is not composed of parts, and does not possess extension, or any other attributes of matter. It cannot be added to, and subtracted from bodies, like Caloric, electricity, and other forms of imponderable matter. And as it is well known that oxygen is the essential constituent of the atmosphere in supporting life by respiration, the question arises whether it produces the effect by its immediate agency, or by the evolution of an imponderable fluid, as during the process of ordinary combustion. But the quantity of vegetable life, as well as that of the lower animals, bears no relation to the amount of oxygen, which is even more abundant in the polar than in the middle and tropical latitudes, but is in proportion to the heating influence of the sun. Besides, it is certain that oxygen exerts no influence whatever in maintaining the functions of animal life; unless it undergoes a chemical change, by which Caloric is evolved and united with blood in the lungs. It is therefore manifest, that oxygen is not the life-sustaining principle, independent of Caloric." In regard to the various electrical theories of life, Dr. Metcalfe maintains, that in reality Caloric and electricity are mutually convertible into one another, and are therefore only modifications of one and the same essence; and he observes: "it is not in the concentrated form of electricity that solar Caloric maintains the fluidity of the ocean, the elastic force of the atmosphere, the process of evaporation, and the various phenomena of vegetable life; or that animal heat causes the fluidity of the blood, the heart to beat, the nerves to feel, and the limbs to move; in short, that all electrical theories of life have been incapable of any practical application, because founded on partial views of nature, which, in reality, explain nothing."

After showing, by a vast number of facts, that the aggregate vital energy of animals in health is directly in proportion to the amount of Caloric they obtain from the atmosphere by respiration, Dr. Metcalfe reduces the problem of life to the narrowest possible compass by observing that if a man in perfect health, divested of clothing, were immersed in a bath of mercury at the temperature of 30° below zero, he would be instantly deprived of life, without the loss of any known principle except Caloric. Where then, he asks, would be the *Archæus* of Paracelsus, the *animal spirits* of the mechanical physicians, the *spirit* or *pneumatical body* of Bacon, the *Aether* which Newton regarded as the cause of animal motion, the *Anima* of Stahl, the *nervous fluid* of Willis, Böerhaave, Cullen, and others, the *irritability* of Glisson, the *vis insita* and the *vis nervosa* of Haller, the *excitability* of Brown, the *materia vita* of John Hunter, the *nisus formativus* of Blumbach, the *sensorial power* of Darwin, the *conservative principle* of Blane, the *organic spirit* of Pring, the *vis medicatrix naturæ*, and the *vital force*, of so many writers? The author adds, "would this sudden loss of motion, sensation, and intelligence, be owing to the abstraction of some unknown hyperphysical *entity*, or of that æthereal fire which warms in the sun, and actuates the universe. If the quantity of life throughout the earth be in proportion to the heating power of the sun, what is the use of animal heat? Is it not the essential character of a *vera causa* that its power should be proportional to the effects it produces, and that the latter should cease in its absence? Is it philosophical to assume the existence of more causes than are sufficient to explain the phenomena? Or if an immaterial and unknown principle of life be still admitted, will it explain anything in the absence of Caloric?" (P. 613–14.) These queries will not be easily answered by the advocates of a metaphysical vitalism. But even among these Physiologists may be traced a disposition to appreciate the importance of Caloric in the phenomena of life; while our friend, Professor Paine, admits "that it is peculiarly a vital stimulus, and that its action is directly on the powers of life"—(Med. Phys. Com., Vol. xi., p. 20), and Dr. Metcalfe maintains that "*Caloric* is not only the most potent and universal stimulant in nature, but the *cause of stimulability*." Also the veteran Caldwell, although strongly opposed to the chemical theory of respiration, regards "the vital principle as a species of *imponderable matter*, and an essential element of organized bodies;" but without explaining what it is, or how it operates. In a valuable paper on Febrile Caloricity, which we have just received from Dr. Dowler of New Orleans, he speaks of "Caloric as the great motor of the Universe."

But we must proceed with Dr. Metcalfe's theory of animal Heat. He observes that a complete knowledge of all the changes which food undergoes while passing through the system, would explain nearly everything hitherto mysterious in the operations of animal life; since it involves the whole theory of respiration, sanguification, secretion, nutrition, and waste." After a careful examination of all that has been written on the subject, he maintains that animal heat is evolved chiefly, if not entirely, in the lungs, and not in the systemic capillaries, nor by a combustion of the solid tissues, as maintained by Liebig, and many other late Physiologists. In support of this view, he adduces the analyses of the celebrated Michaelis, who found a larger proportion of carbon and hydrogen in venous than arterial blood of the calf; the main results of which are shown in the following Table:—

	Venous blood.	Arterial blood.
Carbon, - -	52.107 -	51.921
Hydrogen, - -	7.766 -	7.533
Nitrogen, - -	16.700 -	16.800
Oxygen, - -	23.405 -	23.744

But, says Dr. Metcalfe, if the combination of atmospheric oxygen with carbon and hydrogen, takes place in the systemic capillaries, arterial ought to contain more carbon and hydrogen than venous blood, which is contradicted by the experiments of Michaelis. And if the chemical process were affected in the mass of venous blood, its temperature ought to be higher than that of the arteries, for the plain reason that Caloric is always evolved during the formation of carbonic acid, &c. But according to Dr. M., the most decisive proof that Caloric is given out in the lungs, and not in the general circulation, is, that *the temperature of arterial is from 1° to 3° higher than that of venous blood*, as seems to have been vaguely understood by Hippocrates above 2000 years ago; and as noticed by Haller, Black, Plenck, and Menzies; but was first fully established by a series of observations by Dr. John Davy, began about thirty years ago, and given at large in his Anatomical and Physiological Researches, published in 1839. The results of Davy, Dr. M. states, have been confirmed by repeated experiments made by himself, on sheep and oxen, immediately after they were killed, and before the action of the heart had ceased, during the winters of 1839 and 1840. It is certainly a remarkable fact, that in the late work of Liebig on Organic Chemistry, there is not a single experiment tending to show whether there is any difference between the temperature and chemical composition of arterial and venous blood; nor any notice of the experiments of Michaelis, Davy, and others,—an omission which proves that Liebig is not even moderately conversant with the actual state of science, as has been proved in many other cases, by Schleiden and Professor Mohl. In fact, Liebig has the rashness to assert that "*arterial and venous blood have the same temperature.*" (Op. cit., vol. ii., p. 272, 1st ed.) "It is, therefore, evident," says Dr. Metcalfe, "that his whole theory of animal heat is fundamentally erroneous; while in some respects it is even more defective than that of Black, Lavoisier, Crawford, and Dalton, who maintained rightly, that animal heat is evolved in the lungs, and given up by the blood to the solids in the systemic capillaries, but without explaining what office it performs in any of the vital functions. Liebig has shown himself equally ignorant of Physiology, when he asserts that 'the globules of the blood take no share in the nutritive process;' since it has been proved by the numerous experiments of Prevost and Dumas, Denis, Le Canu, Mayer, Autenreith, Berthold, Letellier, and others, that arterial blood of the goat, sheep, dog, and cat, contain from 12 to 30 per cent. more of red particles than venous blood;" proving that during every circulation of the former through the general system, a portion of them is transferred to the solids in maintaining the nutritive process; while it is universally admitted that every part of the body is nourished at the expense of arterial blood.

Considering the palpable manner in which Liebig has contradicted himself in regard to the cause of animal motion, it is remarkable that his work should have had even a short-lived reputation. For he maintains in many parts of his work, that "everything in the animal organism to which the name of motion can be applied, proceeds from the nervous system." Yet in opposition to this assertion, which is refuted by the well-known existence of vital motion in plants, and in many of the lower animals that have no nerves, he asserts in another page of the same volume, that "the only known ultimate cause of vital force, either in animals or plants, is a chemical process." But in direct contradiction of the foregoing statements, he declares in another place, that "the cause of the phenomena of living bodies is not a chemical force. * * * It is a *peculiar* force, because it exhibits manifestations which are found in no other known force."—(Op. cit., vol. ii., pp. 3, 30, 32, 34, and 232.) These contradictions have, also, been fully pointed out by Professor Paine in a recent publication.

"If," says Dr. Metcalfe, "carbonic acid were formed in the systemic capillaries (as supposed by Edwards, Müller, and Liebig), they ought to have a higher temperature than the lungs, for the plain reason that wherever oxygen unites with carbon, Caloric is evolved. But that the temperature of the blood is reduced, instead of being augmented in the systemic capillaries, is evident from the fact that on returning to the right side of the heart, it is found to have lost from 1 to 3° of Caloric, together with its bright florid hue, a portion of its organic particles, and the power of maintaining the actions of life." But on passing through the lungs, it gives off carbon and hydrogen, that unite with atmospheric oxygen, by which Caloric is evolved and imparted to the blood, its temperature elevated, its color changed to the scarlet hue, its organic particles augmented, and its vital properties renewed. In this state it excites the left ventricle of the heart to contract, by which it is impelled into the ultimate tissues of the whole body, where the Caloric just received in the lungs is employed in transferring a portion of arterial blood through the delicate coats of the capillaries, uniting them with the solids, and in elaborating the various secretions,—after which the blood returns to the lungs for a fresh supply of organic particles, and of the living fire that causes them to unite with the different organs, and maintains their activity. Nor is it more remarkable, says the author, that the Caloric evolved in the lungs during respiration should there convert chyle into blood, than that solar Caloric should cause the germination of seeds, the growth of plants, and all the vital transformations of the vegetable world. Nor is it more strange that animal heat should cause the particles of arterial blood to unite with the muscles, nerves, brain, &c., than that the Caloric of liquids and gases should be essential to their combination with solids and with one another. Moreover, as the quantity of secretion and growth throughout the vegetable world is always in proportion to the heating power of the sun, *ceteris paribus ;* so is the activity of digestion, sanguification, secretion, nutrition, muscular motion, &c., in animals during health, directly in proportion to the amount of Caloric they derive from the atmosphere by respiration, but diminished whenever the temperature of the body is reduced below the normal standard. From which he concludes that nervous influence is not the cause of vital energy, as maintained by Liebig, but an effect of that principle by which the brain and nerves, like all the other tissues, are formed and animated.

The most important fact developed by the researches of Dr. Metcalfe is, that if the temperature of the blood be not raised above that of the solids while passing through the lungs, there could be no transition of Caloric from one to the other, no combination of organic particles with the tissues, consequently, the formative process could not go on, and all the vital functions would cease. The proof of which is, that after giving off to the solids the animal heat obtained in the lungs, the blood is no longer in a condition for maintaining the nutritive process until renovated and re-supplied with Caloric by respiration. (Book iv.)

We have thus presented a brief, and doubtless, imperfect sketch of the views entertained by our talented countryman, on this extremely interesting and important subject. Their connection with pathology must be deferred to a future occasion. From the notices the work has received abroad, we are justified in saying that it is among the most able and original works on Natural Philosophy and Physiology, which our country has yet produced, and one among the few destined to exalt our reputation in the eyes of foreign nations. The author appears to us to possess a fine philosophical genius—a mind peculiarly adapted for the investigation and simplification of abstruse questions in every department of physics. His doctrines and views are so bold and original, so comprehensive in their scope, so clearly set forth, and so supported by facts and reasoning, as cannot fail to command the attention of the reader, and which justly entitle the author to ask for the work, a candid examination on the part of the profession.

In our next we hope to present our readers with his views on Fever and some other forms of disease, which have a direct and very important bearing on the practice of medicine.

Art. XIII.—*Transactions of the New York State Medical Society.* Vol. VI., Part II. Albany, 1845.

The Transactions of the New York State Medical Society have always held a respectable rank among the medical contributions of the day; not always, perhaps, characterized by great originality, or depth of research, but embracing a considerable amount of plain, practical, common-sense matter.

The first article in the present number, is the Annual Address, before the Society, by Joel A. Wing, M. D., President; on *Spinal Irritation.* The views presented by the writer, in relation to the causes, symptoms, pathology, and treatment of this affection, are those generally entertained by well informed physicians at the present time. Of the influence of *fashion*, in predisposing to this disease, Dr. W. thus remarks:

> "*Fashion*, in various ways, favors the development of spinal irritation, yet in no particular, perhaps, does she do so more successfully than in point of dress. Females, especially in this respect, are the doomed subjects with whom this mania rages. The cords and stays may, indeed, give them a wasp-like appearance, yet not more certainly so than the practice will do violence to their health, and predispose them to suffering from this affection. The walls of the chest are thus compressed, and the due action of the heart and lungs is impeded. This pressure displaces and disturbs the functions of the internal viscera, and embarrasses and enfeebles the action of the muscles of the trunk. It is a settled point in physiology that continued pressure on the soft parts will induce an alteration of their structure, and finally, their absorption; and it is equally an attested truth, that the disuse of a part will diminish its powers of action; so that the compression in question cannot but tend to deteriorate, if not destroy, *the muscles of the trunk*—the well adapted stays which nature has instituted, whereby we are enabled to maintain the erect position. By the same reasoning, it may be inferred

that the internal viscera are lessened in size, altered in structure, and rendered torpid; all of which would be tributary to the existence of spinal irritation."

The following observations on the headache, which often attends this affection, are judicious, discriminating, and practical.

"Spinal irritation of the *cervical vertebræ* seldom exists unaccompanied by headache, the nature of which is almost as often mistaken, as its treatment is unsuccessful. We shall first contrast its indication with that of *congestive headache.* In the *latter*, we find vertigo, with a sensation of weight in the head, accompanied by either an acute or dull throbbing, transient or diffused pain. In the *former*, the sensation is that of distress, and the pain is of a darting and stabbing character, confined to certain portions of the head, and attended with *local pulsations.* In the *latter*, the pain is relieved by change of posture, exists with signs of general plethora, and yields to antiphlogistic remedies. In the *former*, change of position affords little or no relief, the countenance is pale, the pulse feeble, pressure on the upper cervical vertebræ brings on a paroxysm of pain, and depleting measures enhance the sufferings of the patient.

"There is little or no danger of headache from irritation of the spine being confounded with that of an *inflammatory character.* The former is attended with a weak pulse, absence of fever, cold extremities, pallid countenance, and spinal tenderness. The latter exists with a full pulse, general fever, flushed face, exalted temperature of surface, and suffusion of the eyes. The pain of the former is lancinating, and, for the most part, local and paroxysmal. In the latter it is acute and throbbing, diffused and continuous, and in aggravated cases, convulsions and delirium ensue.

"Spinal may be distinguished from *sympathetic headache* by a strict attention to the state of the internal organs. Sympathetic headache, in most instances, depends upon functional derangement of the stomach, liver or alimentary canal, which is indicated by the usual signs of indigestion and imperfect assimilation, such as a foul tongue, loss of appetite, nausea, and vomiting, flatulence, costiveness or diarrhœa. The pain is not generally confined to any particular locality, yet in some *few* cases it affects *merely the forehead and temples.* It is of a heavy and oppressive, or acute and sharp character; it is relieved by vomiting, regulation of diet, and such other means as are calculated to restore the functional integrity of the internal organs. *Spinal headache* is frequently connected with derangement of the digestive process, and, in *such cases*, the diagnosis is very difficult, from the complication of symptoms; yet its distinctive character becomes evident on the use of remedies adapted to restore the functional derangement. In *pure* spinal headache, the tongue is generally clean, the appetite normal, and the digestion perfect. Considering these contrasting signs together with the existence of spinal tenderness, it would seem not an easy matter to mistake *spinal* for *sympathetic headache.*

"Headache arising from spinal irritation, may be distinguished from *organic headache* by the following points of difference. In the former the pain is lancinating from *various points;* in the latter, from but one. In the *former*, it is irregularly intermittent, and transiently paroxysmal; in the *latter*, the intermissions are distinct and perfect, protracted paroxysms occur, and, in the *advanced stages*, the pain is continuous, attended with involuntary muscular contractions, partial, and sometimes total loss of one or more of the senses. In the former, there is spinal tenderness; in the latter it is wanting.

"The affection most likely to be mistaken for the one in question, is *intermittent headache.* The pain in this bears a stronger analogy to that of spinal headache than any to which we have alluded; yet there is no difficulty in distinguishing the one from the other, if it be remembered that the pain of intermittent headache occurs in paroxysms at *regular periods*, with marked and protracted intermissions, and is induced and continued by such causes as give rise to intermitting fever."

The following quotation presents a general outline of the treatment to be pursued in cases of this disease.

> "In all cases of this affection, the *general* indications are, to correct existing functional derangements, and to control the idiosyncratic tendencies of the patient; the *local* indications are, to remove spinal tenderness and nervous irritation. The first can be fulfilled by the use of remedies adapted to the state of the system, and calculated to secure the normal action of its organs; the second, by the judicious use of counter-irritation, and depletives to the spine, and along the nervous trunks which may be involved in the same irritation.
>
> "As the condition of the general system may be entirely opposite, and the organs deranged dissimilar, in different cases, it is evident that the *general* remedial means should vary in point of character, to suit each individual case. If a pyrexial condition of the system accompany this affection, antiphlogistic means will be found serviceable. If there be present in a case, anemia with its usual phenomena, or indigestion, or biliary derangement, or constipation, or a disordered condition of the uterus, or an abnormal excitability of the system,—as they respectively appear, it will be necessary to administer tonics, stomachics, alteratives, emmenagogues, sedatives, anodynes, and antispasmodics. Local depletion of the spine may be effected by wet-cups or leeches; and counter-irritation may be secured by friction with, or without liniment, dry cupping, setons and issues, blisters, antimonial ointments, or plasters, and by acupuncturation."

With respect to *local* treatment, Dr. W. very properly commends the practice of frequent *dry cupping*, as more efficient, and at the same time more generally useful than any other application—Vesication, setons, issues, and pustular inflammation, are, for the most part, far too severe remedies in those cases, where the sensibility is morbidly great, and the general irritability likely to be increased by any additional sources of irritation—we are satisfied that dry cupping may, generally, be very advantageously substituted for these, and if other counter-irritation is needed, some of the milder stimulating liniments may be employed, as the compound galbanum plaster, &c. The action of dry cups we have found to be prompt, powerful, and manageable, occasioning but slight excitement of the general system, while, at the same time, the effects are by no means as transient as might be supposed. We cannot agree with Dr. W. that they produce a "profound irritation,"—this does not correctly express the effect; it is rather a well-marked impression, unattended with inconvenience to the patient and comparatively permanent. It is a remedy which may be used in any form or stage of the affection without injury, which can scarcely be said of anything else; although it is particularly adapted to cases of a sub-acute or chronic character, in which the pains are comparatively dull and deep seated, and in which the spinal tenderness is not excessive. Dr. W. speaks highly of its beneficial effects, in the relief of the paroxysmal pains and hysterical symptoms which so frequently exist with spinal irritation, and thinks it especially indicated in cases where this affection coexists with emaciation, anemia, or chlorosis, and also in cases where the *wet cups* have been frequently used and are no longer tolerable. Dr. W. truly observes, that the efficacy of this mode of counter-irritation depends very much on the size and shape of the cups, and the manner of applying them. He thinks the cups in ordinary use entirely too small, and inapplicable from their shape; and that they should vary in size, from 6 to 20 ounces, and their mouths, instead of being plain and round, should be round and curved, so as to form a segment of a large circle. "Cups of this description, properly applied, induce profound local irritation, and are superior to the ordinary cups, inasmuch as the spherical form of the body interposes no obstacle to their use" (P. 92). The only thing in the address which appears to us decidedly objectionable, is the recommendation of *acupuncture*, a barbarous practice—hitherto chiefly confined to the semi-civilized nations of the east—where we hope it may stay confined; at least, until more can be said in its favor than has ever yet appeared.

The second communication is "An Address delivered before the Herkimer Medical Society," January, 1845, by L. Green, M.D., President of the Society.

The subject of Dr. Green's Address is the "Condition of the Medical Profession."—After alluding, in emphatic terms, to the extensive prevalence of quackery among us, he alludes to the causes of its existence, the chief of which, he thinks, may be traced to the profession itself.

> "The Profession," he remarks, "have the power, if they will only exert it, to raise the medical profession to that standing, to that respect, which it should and deserves to command. A French writer has said, that the legal profession is the only aristocracy of this country—this in a great measure is true. We see that most of the avenues to power are occupied by and thrown open to them. If we ask why this is so, I answer, that as a profession they are *obliged* to be better educated than any other class of the community. It allows no '*quacks*' to dabble in its niceties and technicalities. The student at law is required to serve an apprenticeship of *seven* years, while the medical student has but *three.* Now I ask, why is it not as necessary and useful for the student of medicine to become thoroughly educated in the classics as the student at law? Why should he not be in every respect as accomplished a scholar? How often do we see, and I lament that such is the fact, that some wayward youth too idle to labor, and many times after having been dismissed from the shop of the mechanic, or many of them in succession, as too intractable to learn a trade, enters the office of a physician, and in a short course of time, with perhaps very little or no intellectual acquirements, claims and receives the 'honors of the medical profession.' Can such a person do honor to his calling? On the contrary, is it not probable that this state of things is one the most detrimental to the profession?"

As a remedy for this state of things, Dr. G. recommends that the time of study should be extended, and the requirements for entering the profession be more exacting, so that true science and quackery may be so far separated that the public may be able to distinguish between their respective claims to merit and patronage, and thus be led to award to the former that deference and respect which are justly due. Dr. G. expresses no decided opinion as to the wisdom of the late law of the State, in relation to medical practice; he, however, insists on the necessity of keeping up the local and state medical organizations, and of each one contributing what lies in his power to the common fund of professional knowledge.

The third article is an address by Dr. S. A. Cook, delivered before the Medical Society of the County of Rensselaer, at their annual meeting, June 11, 1844.

Dr. Cook has taken up the subject of the late repeal of our State laws, "regulating the practice of physic and surgery," and has probed the matter pretty deep, and we think quite successfully. Assuming that the late laws (which he very properly thinks are designed to benefit the public, and not the profession) had ceased to be useful, he seeks to find the cause, which he explains as follows:—

> "But the period of this usefulness soon passed away, and as the character of the physician became estimable, it was sought for in other channels than that of

true merit: as the diploma became valuable it was purchased at the lowest possible price of labor and money, and too often it must be confessed, the latter has been allowed to make up for a deficiency of the former. Thus imperfectly educated individuals have crept into the fold of the profession, and having the stamp of the order, obtained no matter how, they have borne like an incubus upon the character of the whole mass. Indeed such was the form of our medical statutes, that could a person by any means obtain a diploma from any of the county societies of the state, or from any college authorized to confer the degree of *Doctor in Medicine*, whether in the State or out of it (and this from the great number of rival institutions with their earnest competition has been and is still too easily accomplished), he could force himself into a membership of any county society, unless it could prove that he either was grossly ignorant or shamefully immoral.

"This single feature in the charter of our county medical associations, founded probably upon what the legislature deemed a necessary precaution to prevent any abuse of power, was the canker-worm that lay at the root of their utility, and after a few years of ardent strength, and a few more of sickly existence, they ceased to be associations for improvement in medical science; and too frequently were only kept in a state of organization, for the purpose of conferring upon their members the privilege of collecting the fees for services rendered to the sick, whether those services were of any real value to the patient or not. Instead of stimulating to improvement, they only served to give currency to ignorance and imposture; and though probably the majority of them would not fall altogether under so sweeping a censure, yet by being the repository of medical police, they often exhibited scenes of discord, calculated to disgust the more liberal and enlightened portion of their members, and lower the character of the profession in the estimation of a scrutinizing public."

There is, undoubtedly, much truth in these remarks. The moment the Legislature made it obligatory on the county societies to admit every one who could show a license, or a degree, no matter how obtained, although (as we know to have actually happened in more than one instance) the certificate or diploma had been stolen, the original name erased and the possessor's inserted, that moment the societies lost their respectability, and whatever of moral influence they previously possessed in the community; and instead of being a mark of honor or distinction to belong to them, it became almost a stigma, so that many respectable physicians allowed themselves to be prosecuted at law, sooner than enrol themselves among such associates.

According to the act of May 6th, 1844, in relation to the practice of physic and surgery, we find, that by the first section of this Act 22 of Art. 14, Tit. 7, part 1, Revised Statutes, which incapacitates persons not licensed according to law from enforcing by law the collection of any debt, arising from such practice, is expressly repealed; and all laws then existing inhibiting the collection of debts by any person, whether licensed or not, for services rendered in the practice of physic and surgery, are swept from the Statute Book. The second and third sections of the same Act repeal all existing laws, imposing any criminal prosecution or penalty for the practice of physic or surgery, without a license. The fourth section of the same Act subjects the unlicensed practitioner to the same civil liabilities of mal-practice as if he were a licensed physician. The fifth section provides that every person, not being licensed, who shall practise, or profess to practise physic or surgery, or who shall prescribe medicines or specifics for the sick, shall be deemed guilty of a misdemeanor, who, in any court having cognizance thereof, shall be convicted of gross ignorance, mal-practice, or immoral conduct, all other Acts relating to the subject remaining in force. The Attorney General, Mr. Barker, gives it as his opinion (See Appendix, p. 101), that the present Act does not modify or repeal any of the former Acts relating to the practice of physic and surgery, except in the particulars above specified, and of course all other statutory provisions, not inconsistent with these modifications, remain untouched. "All tho provisions, therefore," says Mr. Barker, "regulating the practice of physic and surgery among licensed physicians, are still in force, although they may perhaps prove quite inefficient, from the consideration that the great inducement to become so, may have been taken away by this Act." This being the case, our local medical societies are voluntary associations so far as the admission of members is concerned, the law requiring membership having been repealed. In order for the expulsion or suspension of a member, we are no longer obliged to prefer and establish specific charges before the judges of the County Court, a process which few would be willing to undertake, even had they the leisure to attend to it. Now then is the time to commence the expurgation and cleanse the Augean stable. Let all the *soi-disant* doctors—the advertising doctors—the notoriously immoral doctors—the quacks of every grade and hue, be expelled, and then only will our societies become powerful agents in promoting the cause of good fellowship, and mutual improvement. If physicians will now do their duty, our medical associations will receive a new impulse—membership will become a mark of distinction—the standard of medical acquirement will be raised—the profession become more united—a spirit of inquiry and investigation promoted, and the interests of science advanced. Let frequent meetings be held for hearing papers read, or for the discussion of medical questions, as in the London and Westminster, or the Philadelphia Medical Society, and there will be no difficulty in getting the members together, as has happened in years past, and we may safely calculate upon useful and important results.

With respect to the repeal of the late prohibitory laws, Dr. C. remarks:—

> "Under all the circumstances, then, the state of the medical profession, the state of the public mind, the abrogation of all prohibitory or penal enactments on this subject was undoubtedly judicious. It takes away the dependence of those who neglected all improvement, requiring an individual, instead of a general character, of the members of the profession. It destroys the empiric's strong ground of appeal to public sympathy. It removes the prejudice that has hitherto existed against us as a privileged class, and leaves the profession to direct its own internal affairs, and erect its own standard of excellence."

On this general subject, however, of repealing all prohibitory laws, we happen to differ in opinion from Dr. C., as well as many other of our friends. We will not stop here to inquire what is "judicious," what is "expedient" for the profession; but we ask what is the duty of the State, what are the rights of the people? Physicians are members of the body politic, and they would but poorly discharge their duties as good citizens, did they barely look to what concerns their own interests, without any regard to the interests of the masses. We doubt not it is as well for the profession at large, to do away with all prohibiting laws, in relation to the practice of medicine; but we are equally convinced, that such abrogation is a great political, social, and moral wrong; and it would seem that every government, just emerged from barbarism, would deem it a duty to guard its subjects against the subtle artifices and the deadly practices of the empiric. In every European country, in Mexico, Brazil, and most of the South American Republics, laws, restraining the practice of medicine to those properly qualified, and regularly licensed by authorities designated by the State, are not only in existence, but efficiently and thoroughly enforced, and the consequences are in the highest degree salutary. The principle is not only admitted, but acted upon, constantly in our State legislation, as in laws requiring the inspection of beef, pork, flour, oil, flax seed, leather, tobacco, lumber, spirits, &c. In order to protect the people against imposition in the purchase of these different articles, inspectors are appointed by the State, whose duty is to examine every article of the kind that enters our market. But how much more necessary and important are laws regulating the qualifications of those who deal in articles still more closely connected with life and health.

But it is said such laws cannot be enforced, and are therefore useless. This we deny, and point to Brazil, to Mexico, to Prussia, to Austria, to France, in proof of our position. Prohibitory laws are enforced in these and other nations, and they might be in our own country. In this State, we have always had a saving clause in our Statute, as would seem for the express benefit of every quack who chose to avail himself of it, we mean that which allowed any person to practise the healing art, who used " roots or herbs, the growth of this State !" Our law-makers must have known, that the act could never be enforced, with such a provision, and they judged rightly ;—it never has been. We take this as the most charitable supposition, for otherwise we should have to believe that they really thought there was no plant or vegetable growing in the State of New York, capable, if misapplied, of doing injury. It might have been seen that since the burden of proof would fall on the complainant, such a clause was equivalent to a universal license ; large enough to allow a thousand Thomsons, Sweets, and Grouts, to escape.*

We say then that it is the duty of every good government to protect, as far as it can, the lives and health of the people—and since the people are the government, it is their duty to protect themselves, or at least make the attempt. Theft, murder, arson, and many other crimes cannot be altogether abolished, and yet no government allows them to be committed with impunity. If abuses cannot be totally prevented, they may be to a great extent kept in check.

Such is, undoubtedly, the correct theory on this subject—and we be-

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* As evidence that our Legislature is favorable to Medical Science, we may state what is well known to some of our readers, that in 1806, it purchased of Mr. John M. Crous, for the sum of $2000, the following " *Recipe for the cure of Hydrophobia*," and published the same at the public expense, in all the newspapers of the State. We have, however, received no reports of cures by the remedy, if there are any, we shall be happy to publish them.

Recipe for the cure of Hydrophobia.

" 1st. Take one ounce of the jaw bone of a dog burned, and pulverized or pounded to fine dust.

" 2d. Take the false tongue of a new foaled colt ; let that be also dried and pulverized.

" 3d. Take one scruple of the verdigris which is raised on the surface of old copper lieve it will be eventually carried into practice. It is true policy, however, to let the matter rest for the present, until the people are compelled, in self-defence, to take it into their own hands, and seek for a remedy, Time will remove existing prejudicces, and the public will learn what is for their true interest.

But we have not space to continue this subject in our present number; we may resume it again shortly.

The third article is a Report of "a case of Lithotomy in the Female,' by B. Baker, Jr., M.D., of Norwich, Chenango County, N. Y.

The mode of operating was as follows:

"*Operation.*—She was placed on the table and secured in the common way. A straight grooved staff was introduced through the urethra and the stone felt with the beak of the instrument. The incision was now commenced by dividing the urethra half an inch posterior to the meatus urinarius with a sharp pointed bistoury, into the groove of the staff. The beak or probe-point of the lithotome knife was introduced through the opening thus made in the urethra into the groove of the staff and pushed forward along the groove, in a direction obliquely, outward and downward, until it penetrated the bladder, and the incision continued until of sufficient size to admit the forceps. The knife was now withdrawn and the forceps introduced. A stone about the size of a nutmeg was grasped and drawn out. The search was resumed and another stone secured and removed, and so on to the number of ten, varying very little in size. No more stones being found, the bladder was faithfully washed out with warm milk and water and the patient put to bed. She bore the operation well, and expressed herself freer from pain than she had been for six months. She could now lie on her back or in any other position that was proper. We found the walls of the neck of the bladder very much thickened. This was probably the result of the long continued irritation from the friction of the stones."

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by lying in moist earth: the coppers of George I. or II. are the purest and best.

"Mix these ingredients together, and if the patient be an adult, or full grown, take one common teaspoonful a day, and so in proportion for a child according to its age. In one hour after, the filings of one half a copper of the above kind, if to be had: if not, then a small increased quantity of any baser metal of the kind; this is to be taken in a small quantity of water. The next morning fasting (or before eating) repeat the same as before. This if complied with after the biting of the dog and before symptoms of madness, will effectually prevent any appearance of disorder; but if *after* the symptoms shall appear, a physician must be applied to, to administer the following, viz: three drachms of the verdigris of the kind before mentioned, mixed with half an ounce of calomel, to be taken at one dose. This quantity the physician need not fear to administer, as the reaction of the venom then diffused through the whole system of the patient neutralizes considerably the powerful quality of the medicine. Secondly, if in four hours thereafter, the patient is not completely restored, administer four grains of pure opium, or one hundred and twenty drops of liquid laudanum.

"N. B. The patient must be careful to avoid the use of milk for several days after taking any of the foregoing medicine. JOHN M. CROUS."

"ALBANY, *ss.*—John M. Crous, being duly sworn, deposeth that the above account and prescription for the remedy and cure for hydrophobia or canine madness, is a just and true account and prescription, and the only one used and practised upon by himself for more than twenty years past, and which has never failed of perfect success in any instance of the vast number of unfortunate human beings who have been bitten by the mad dog, and who have applied to him, the deponent, for relief.

"JOHN M. CROUS."

Sworn the 29th day of March, 1806, before me,

JAMES KENT, Chief Justice, &c.

The patient recovered completely, and Dr. B. attributes the successful result to the mode of performing the operation, viz: leaving the meatus and anterior portion of the urethra undivided.

The two remaining articles are, one by Dr. George H. White, on "Medical Education and Legislation," before the Columbia County Medical Society; the other by Dr. Joseph Bates, on, "Botany, indispensably necessary to the Physician." Both of these, like the address already noticed, are highly creditable to their authors, and calculated to exert a very favorable influence upon the profession generally. An appendix of 120 pages, on various subjects, closes the pamphlet.

Art. XIV.—*Vital Chemistry, or Lectures on Animal Heat.* By Thomas Spencer, M.D., Professor of the Institutes and Practice of Medicine, in the Medical Department of Geneva College. Geneva: 1845. [Second Notice.]

The above is the title to a duodecimo volume, of 114 pages, published by Prof. Spencer, at the request of the Medical Class in the Geneva College, to whom the substance of the work had been given in the form of Lectures. The intrinsic interest and importance of the subject, aside from the novelty of some of the doctrines maintained, affords a sufficient apology for devoting a few pages in review of the volume before us. The present era in Medical Science seems to be particularly prolific in attempts to subjugate the whole field of physiology, to the strict domain of chemistry. Indeed, at no time since the days of Alchemy has the science of chemistry more rapidly extended its boundaries, or assumed loftier pretensions. In perusing the writings of some, one would almost imagine that the crucible and the test-glass had assumed the place of the scalpel and the *principia vitæ*, in the researches of the medical philosopher. And in no department of physiology has the chemist assumed higher pretensions, or taxed his ingenuity for the invention of a greater variety of theories, than in regard to the development of animal heat. But all these theories, from the time of Black and Crawford, down to the author of the volume whose title we have given, are based on the supposed union of carbon and oxygen, and the well known laws of free and latent caloric. Hence, we may regard them all as only modifications of one and the same hypothesis. Without, however, pausing to enumerate all, or even any of these modifications, we will proceed directly to a consideration of the doctrines maintained in the work more immediately under examination. And for the sake of both brevity and clearness, we shall endeavor to embody all these in the form of a few simple propositions.

1st. The oxygen of inhaled air, instead of entering the arterial blood, and thus going the round of the circulation, combines directly with carbon, and is again emitted in the form of carbonic acid. (See page 4th of Professor Spencer's work.)

2d. The free caloric which is evolved in the lungs by this union of oxygen and carbon, is mainly rendered latent again, by the constant formation of the watery vapor which is thrown out with the carbonic acid at each expiration. (See page 16.)

3d. This union of carbon and oxygen in the lungs, is a genuine combustion. Thus on pages 31 and 32, our author likens it to the ordinary burning of wood.

4th. Both the watery vapor, and the carbon which unites with the oxygen in the lungs, to be thrown out by expiration, is derived from a *hydrate of carbon*, previously existing in venous blood. And this hydrate of carbon is identical in composition with *woody fibre.* Hence, on page 31st, we find the following, viz: "You may say, from what has been advanced, that these dense atoms of Hydrate of Carbon, being components of woody fibre, must be infinitesimal *blocks of wood*, floating in the sanguineous mass. *This is doubtless true;* and let us now see if we can find any analogy between the *burning* of aggregated atoms in the form of blocks of wood, and the combustion of these atoms of carbon in the lungs."

5th. The same process takes place to some extent on the skin as in the lungs. Hence on page 39th, we find the following:—"Physiologists have demonstrated that the surface of the body, as well as the lungs, is constantly evolving carbonic acid gas; and this fact accounts alike for the *aqueous discharges occurring from both pulmonic and cutaneous surfaces, in the form of insensible vapor.*"

Having thus disposed of the oxygen consumed in the lungs, and the carbonic acid and aqueous vapor thrown off, both from the pulmonary and cutaneous surfaces, together with much the greater part of the heat or caloric evolved in the process; our author next proceeds to explain the formation of the hydrate of carbon, which he supposes to exist in the venous blood, and the evolution of the caloric, on which animal heat depends. For this purpose, he assumes that the hydrated peroxide of iron exists in venous blood; that when this meets with the chyliferous fluids brought in from the process of digestion, in the capillary vessels of the lungs, it gives off a part of its oxygen, which uniting with the carbon of these fluids, converts it into carbonic acid, while the iron is left in the form of protoxide. The carbonic acid converts a part of the protoxide into a carbonate; and hence, we get circulating in the arterial blood, carbonate of protoxide, and protoxide of iron. These, on arriving in the systemic or venous capillaries, are again changed. The carbonic acid of the carbonate is decomposed, the oxygen goes to the iron, converting it again into peroxide, in which state it circulates through the venous system, and the carbon of the carbonic acid unites with the elements of water to form the hydrate of carbon. The hydrate of carbon, on reaching the air in the lungs, unites with oxygen and is thrown off in the form of carbonic acid and watery vapor; while the peroxide in the pulmonary capillaries is again converted into carbonate of protoxide, and protoxide of iron.

Such is the circle of chemical changes which our author supposes to be constantly going on in the blood. But for the maintenance of animal heat, he seems to rely almost entirely on the caloric developed in the formation of hydrate of carbon, throughout the whole venous or systemic capillaries. Thus on page 38 it is said, that "As fluid and gaseous substances, like water and carbonic acid, on becoming solid must part with latent heat, it hence follows that wherever the capillaries form these atoms of hydrate of carbon, latent heat must be set free, and thus furnish an incessant supply of this life-imparting agent." And again on page 47, he says, "From this union, water and carbonic acid are transformed into a solid substance; hence latent becomes free heat, at every point where *red* blood circulates." And still more explicitly on page 6th, he says, "In attempting to settle this point, by proving that the *same triple compound* of *carbon* and the *elements* of *water* is formed by *animal*, as by *vital vegetable chemistry;* and that its formation in the systemic capillaries, and its expulsion from the pulmonic, *constitutes* the *immediate cause* of the *function* of *calorification*, I shall endeavor," &c. From all this we may draw the following direct conclusions, viz.: 1st. When the chyliferous fluid arrives in the pulmonary capillaries, its carbon combines with a part of the oxygen of the *peroxide* of iron contained in venous blood; thereby converting both into carbonic acid and *protoxide* of iron. 2nd. This carbonic acid unites with a part of the protoxide of iron, to form carbonate of protoxide, in which state it is carried through the arteries to the systemic capillaries; where it is again decomposed, the oxygen of the carbonic acid uniting with the protoxide to re-convert it into peroxide, and the carbon uniting with the elements of water to form the hydrate of carbon, or "infinitesimal blocks of wood." 3d. This hydrate of carbon being a *solid*, the latent heat of the carbon and water which enter into its composition becomes free throughout the whole system. Such is a concise view of Prof. Spencer's doctrines concerning animal heat. The attempt to explain the formation of gastric juice, the secretion of bile, &c., by which to connect all the important secretory organs together as one harmonious chemical apparatus, we shall not notice at present, as they are intimately connected with his views of calorification, and must stand or fall with them. In view of the foregoing propositions we would seriously ask the following questions, viz.: 1st, On what known principle of chemical affinity do we get the decomposition of peroxide of iron in the pulmonary, and its recomposition in the systemic capillaries? The only explanation offered by Prof. Spencer consists in the two following quotations from Liebig. "Hydrated peroxide of iron in contact with organic matters, destitute of sulphur, is converted into the carbonate of the protoxide." From this it is inferred that the blood in the pulmonary capillaries being *organic matter* destitute of *sulphur*, the peroxide then must be changed into carbonate of protoxide. But again, says Liebig, "Carbonate of protoxide of iron in contact with *water* and *oxygen*, is decomposed; all the carbonic acid is given off, and by absorption of oxygen it passes into the hydrated peroxide which may again be converted into a compound of the protoxide." Hence as the blood in the systemic capillaries always contains *water*, and the carbonic acid itself contains oxygen, therefore, the carbonate of protoxide in these capillaries must be converted into peroxide, while the carbon combines with the elements of water to form the hydrate of carbon. But does not *water* and *oxygen* exist in the blood in the pulmonary capillaries quite as abundant as in the systemic? And if so, by what magic power does our author suspend their decomposing influence over the carbonate of protoxide, in the one place, and not in the other? Indeed if this last quotation from Liebig is true, would not the presence of *water* and *oxygen* which we know to exist at every point, or in every part and parcel of blood whether arterial or venous, render the existence of the carbonate of protoxide of iron in any part of the circulatory system, wholly impossible? This attempting to be guided by the ordinary laws of chemical action, and yet suspending the operation of those laws to suit our own fancy, is certainly not the most conclusive mode of reasoning. But, admitting for the present, that the oxides of iron exist in the blood, and that they serve as carriers to convey the carbon to the systemic capillaries in a suitable state to be there converted into hydrate of carbon; how much *iron* would be required to hold in combination the amount of carbon which our author supposed to enter into the hydrate of carbon in venous blood, and to be from thence expelled through the lungs daily? The amount of pure carbon expelled from the lungs every 24 hours is stated at 12 or 13 ounces. This would require 32 ounces of oxygen to convert it into carbonic acid; and the resulting 44 ounces of carbonic acid would require the large amount of 72 ounces of protoxide, or 56 ounces of metallic iron. Different writers estimate the time required for the blood to go the entire round of the circulation variously, from 2 minutes to 29 hours. There are no data from which to make an estimate, but if we suppose the average time to be 1 hour, it would evidently require nearly 2 1-2 ounces of metallic iron constantly floating in the mass of the circulation. According to the accurate analysis of Lecanu, the blood of man contains 13. 3 per cent. of blood globules. These dried globules contain only from *four* to *five* per cent. of pure hæmatosine; and this hæmatosine contains 6.64 per cent. of iron.* This would scarcely give 2-10 of a grain of iron in an ounce of blood. And consequently the two and a half ounces which we have shown Prof. Spencer's theory to require, would supply at least 375 lbs. of blood; a quantity equal to Daniel Lambert with his blood, bones, fat and all. But this is not all the iron which our author supposes to be floating in the arterial blood. For when he supposes the peroxide to be changed in the lungs to form the carbonate of protoxide, he also makes three equivalents of protoxide uncombined with the carbonic acid. Thus on page 64, he says: "The oxygen of the peroxide of iron oxidates the carbon of the nutritive fluids; the carbonic acid and protoxide of iron thus formed, unite as carbonate of protoxide. Moreover, there is formed not *only the equivalent* of protoxide in *union* with *carbonic acid*, but *three* other equivalents of *simple protoxide* are formed to go out from the lungs in arterial blood." Now if we add these "*three other*" equivalents of protoxide to our estimate, we shall have 7 1-2 ounces of iron instead of 2 1-2 hourly circulating in the blood. This, according to Lecanu's analysis, would supply 1025 lbs. of blood. But who, possessed of common sense, supposes that the heart of man propels blood equal to the weight of *half a ton* every hour? And yet, either our most careful analysis of blood or Prof. Spencer's theory must be incorrect, or this conclusion is inevitable. 3rd. Does such a substance as "solid hydrate of carbon," or "infinitesimal blocks of wood," exist in venous blood; and in a quantity, too, sufficient to yield to the process of respiration, 12 ounces of pure carbon every 24 hours? In other words, is it a fact, that the "same triple compound of carbon, hydrogen and oxygen" which constitutes "woody fibre" or "lignin," is formed in animals as in vegetables? If so, in what part of the blood is it to be found? Hydrate of carbon or lignin is a well known substance, neither acted upon by water nor alcohol, and converted into gum or sugar by sulphuric acid. But we have yet to learn that any such substance has been detected in the blood of man or animals, although that fluid has been subjected to repeated analysis by the ablest chemists in Christendom. And hence, until Prof. Spencer gives us some proof, aside from his own *ipse dixit*, we shall take the liberty to deny *in toto*, the existence of any such solid compound of water and carbon in either arteries or veins. He attempts to draw an analogy between the formation of this substance in animals and plants. But, instead of an analogy, we had supposed a directly opposite function was performed by each. For, while the leaves of plants decompose carbonic acid, retain its carbon to combine with the elements of water and reject the oxygen, the lungs of animals retain the oxygen and separate the carbonic acid. But he not only assumes that such a solid compound of carbon and water is formed in the systemic capillaries, but attributes to it the darker color of venous blood. In proof of this he adduces the well-known fact that the presence of carbonic acid darkens the color of blood out of the body, while oxygen brightens it again. But this by no means proves that this effect is produced by the decomposition of carbonic acid, and the union of its carbon with the water of the blood. On the contrary, does not the fact that the arterial blood is rendered dark by contact with carbonic acid, directly contradict that part of our author's theory which makes the formation of carbonic acid take place in the pulmonary capillaries ; and go far to show that this acid is not formed until the blood enters the venous or systemic capillaries, and then receives the debris or waste matter of the tissues. But if a substance so permanent in its nature, and so well defined in its properties as lignin or solid hydrate of carbon, is formed by exposing blood to the influence of carbonic acid out of the body,* it would certainly be easily separated and its existence demonstrated ; and yet Prof. Spencer has nowhere intimated that he has attempted to do this, or that it ever has been done by others. Again, we would inquire by what principle in philosophy our author gets hydrate of carbon formed in the systemic capillaries by the presence of oxygen and water, while out of the body the same change is effected by the presence of carbonic acid,† and directly the reverse by the presence of oxygen. 4th. Is it true that the oxygen of the inspired air unites directly with the carbon in the lungs, and is thrown off in the form of carbonic acid by expiration ? We had supposed this no longer a debatable question, until we saw it so confidently answered in the affirmative by our author. And while reading this repetition of the often refuted doctrine of Crawford, we could not help thinking that Prof. Spencer, in his zeal to establish a particular theory, had entirely forgotten the more recent and careful researches and experiments of Dulong, Desprets, Prout, Edwards, and Magnus.

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* See Kane's Chemistry, by J. W. Draper, page 679.

We consider no fact in physiology better established, than that the oxygen of the inhaled air enters the arterial blood in the lungs, and is conveyed in it to the systemic capillaries ; and that the carbonic acid exhaled is a genuine *educt* from venous blood, and not a result of the direct union of carbon and oxygen in the air cells of the bronchi. Thus the experiments of all the eminent physiologists just named, as well as others, show that the relative quantities of oxygen consumed, and carbonic acid formed, continually vary ; and Dr. Edwards states, that on confining an animal for some time in an atmosphere of hydrogen, it was found, in some instances, to exhale a quantity of carbonic acid, even greater than the whole bulk of the animal. And Müller informs us, that cold-blooded animals often consume in respiration, *three times* as much oxygen as they exhale of carbon. Again, the same writer states, that man exhales a greater amount of carbonic acid when the barometer is *low* than when it is high. Finally, the elaborate experiments of Magnus show that both arterial and venous blood hold in solution large quantities of gaseous oxygen, nitrogen, and carbonic acid, which constitutes from one-tenth to one-twentieth of the volume of the blood. That in arterial blood the oxygen is one-half as much as the carbonic acid, while in the venous it is not more than one-fifth, the difference being in some measure proportional to the activity of nutrition. Now do not these facts prove, as conclusively as facts and experiments can prove, that both oxygen and nitrogen are absorbed in the process of respiration; that they penetrate, with the arterial blood, every part of the system; that a part, at least, of the former disappears in the systemic capillaries, while its place is filled by an increase of carbonic acid; and that the excess of carbonic acid in its turn is thrown off by the pulmonary capillaries in expiration? If so, they annihilate by a single stroke, the whole of Prof. Spencer's complicated and laboriously formed theory. And not only so, but they bear with equal force against the doctrines of Liebig, and the whole school of chemico-physiologists. Much emphasis has been laid by this class of writers on the assumed fact, that the development of animal heat was in direct proportion to the amount of oxygen consumed in respiration, and of carbon and hydrogen in the food. Thence our attention is directed with apparent triumph to the high temperature of those animals whose lungs are comparatively large, as the bird, the Arctic Fox, &c. But are not the pulse, and indeed all the vital or organic actions correspondingly active? and hence is it not as fair to infer that their naturally high temperature is the direct result of these, as of the increased quantity of air which they inhale? Again, if animal heat is dependent upon the quantity of oxygen and carbon consumed, how are we to explain the increase of heat in all febrile and inflammatory diseases? In many of these cases the patient takes little or no carbonaceous food for weeks or months, and no one, certainly, will contend that they inhale a greater amount of oxygen than in health; and yet the heat of the body is maintained throughout the whole time, fully equal, or superior to the healthy standard. But we are told that the Laplanders, the Esquimaux, and other tribes in extreme northern regions are enabled to resist the extreme cold to which they are exposed by the large quantities of oily and highly carbonaceous food which they consume, together with the condensed state of the air they inhale. It seems to be forgotten, however, that these same tribes gormandize quite as much food during the warm and active months of summer, and inhale a great deal more oxygen, than while they are shut up in their ill-ventilated huts during winter. And on the principle contended for, how shall we account for the fact, abundantly testified to by travellers, that many of the tribes of Central Africa are quite as *voracious*, and though almost beneath the equator, daily consume quite as much carbonaceous matter as the northern tribes?

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* See Prof. Spencer's Work, page 33d.

† See page 33 and the extract already quoted from Liebig.

We could, with much pleasure, pursue this subject further, and demonstrate, not only that the air during respiration is absorbed and circulates with arterial blood, and that the carbonic acid exhaled is a product of the organic actions in nutrition and regeneration; but also, that the oxygen, instead of serving the mere purpose of *burning* off the "blocks of wood" formed in the system, is in fact the natural stimulus of the whole nervous system, to every part of which it must be constantly applied by means of the arterial blood. And further, that animal heat is the direct result of the internal organic actions; embracing the functions of innervation, circulation, and nutrition; and its degree will always depend on the natural energy and activity of these. But it was not so much our object to broach views of our own, as to make a candid examination of the doctrines contained in the work before us.—N. S. D.

ART. XV.—*Annual Report of the City Inspector, of the City of New York, for the year* 1844. Document No. 63, Board of Aldermen.

THE City Inspector is at once the chief of the Health Police (such as it is); the investigator of, and reporter upon the diseases of the city, and upon the dangers and liabilities of its inhabitants; and the professional adviser of the Mayor and Common Council, in all matters affecting its sanitary condition. To perform the multifarious and responsible duties incident to these trusts, it is clear that no individual who has not received a good medical education, and who is unable by his tact, and energy, and skill, to draw towards him the confidence of the authorities and the public, should be appointed. The enlightened examples of England, France, and Germany, have been long before us as lights for our guidance, while aid and counsel have not been wanting at home, for the use of those upon whom has rested the responsibility of the appointment. Knowing all this, we are led to inquire how this responsibility has been discharged, and in what manner the experience of others, and this proffered aid and counsel have been responded to? The history of the past year will show. In 1844, the newly elected Common Council appointed to fill this important and valuable post, an individual not only utterly discountenanced by the profession, but so deficient in the rudiments of common English education, as to be unable to write with ordinary legibility, and using an orthography, which (judging from several specimens in his own penmanship, which we have seen in the official records) would ruin the reputation of the new art of Phonography. His claim to professional distinction commenced with his having a few years ago endeavored to obtain a livelihood by digging and selling roots and herbs. He was originally a shoemaker somewhere down east.

Of these facts, the Hon. Body which appointed him were not entirely ignorant, and they are not mentioned here as discreditable *to him* (for nothing is known to us of him, previous to his appointment to office, militating against his *moral* character), but simply to show the recklessness with which party spirit will trifle with the best interests of humanity, and to hold up this case as a warning to future magistrates, in carrying out the behests of party.

A vender of roots and root beer was thus selected to watch over the health and lives of 350,000 inhabitants of this city. And how was the measure regarded by the medical profession? Could they quietly sit down under the imputation that science and skill are valueless, and that their self-sacrificing and devoted efforts to improve the condition and preserve the health of their fellow creatures were tamely to pass for naught, by thus having placed over them, as the exponent of their views and feelings, one who had no feeling in common with them, and with whom they *could not* if they would, consult upon any matters professionally connected with the department of public health.

It is at most times difficult to rouse the attention of the members of the profession, and to excite them to action in public matters; the calmness of thought and deportment required by the peculiar nature of their duties, unfit them for mingling in the busy scenes and strifes of the world. But they are sensitively alive to the honor of their calling, and ready to act in a manner becoming its dignity, when assailed on that point. They can bear with the ignorance which nourishes common empiricism—they can even endure the deception practised upon the *soi disant* intelligence of the "upper ten" by the different forms of quackery; but ignorance and deception in the government, they could not regard with complacency.

In this case they memorialized the corporation, remonstrating against the appointment, and petitioning for the substitution of a suitable person in that office. We say *they* memorialized, for that respectful but stringent paper, drawn up by Dr. Forry, the late lamented Editor of this Journal, was signed by nearly 200 physicians, and had time permitted, almost the *whole profession* would have been thus presented before the fathers of the city, so unanimous was the sentiment respecting it.

It was responded to in a manner not expected even by those most doubtful of the wisdom and intelligence of the body memorialized. Had "the party" through their representatives, assented to confess and correct an error, but too plainly pointed out to them, their credit would have equalled the wrongs their opposite course has inflicted upon the whole city. They acknowledged the man's ignorance, yet had the hardihood to maintain, that on this account he was "*equally, if not better qualified for the duties of his office*" (Vide Report of Special Com.), and they firmly adhered to their first choice.

The present is a suitable occasion to refer to this little history, having before us its finale, in the shape of the Annual Report of the mortality of this City for 1844, by the functionary, whose failure in this, not the least important of the duties of the office, has been frequently predicted.

It is, in one sense, the *greatest* document ever issued from the Department, being a portly volume of 157 pages, and the labor, we are informed, of a hired amanuensis. The professional reader would turn to it with the hope of finding within its ample cover some useful philosophic disquisitions upon the diseases of the past years,—some true, though perhaps homely expositions of the causes of the mortality of this large city; at least he would hope to see well arranged and condensed tables, with ample footings and summaries, the study of which would enable him to draw his own inferences respecting it. Alas! for human expectations!

Sixteen pages are taken up with "general remarks." These remarks are mainly brief allusions to, and recommendations of, subjects which have all repeatedly before, either in previous reports from the same office, or other equally well known documents, been brought before the public. Not a new idea is broached, and the old ones are most imperfectly and laboredly set forth. The principal topic discussed in this part of the paper is *sewerage*, but instead of pointing out any *reasons why* an extensive system of it should be adopted, with reference to the public health, we are entertained with an attempted exposition of the *materials and shape* proper for their construction—subjects which belong more appropriately to the Civil Engineer.

The remaining *one hundred and forty pages* are devoted to the tables of mortality, including some informing us how hot and how cold it has been for the last five years; how high and how low the barometer has been during the same time; how much air is inhaled by an individual—and, lastly, how much rain fell, and how many days it took to fall in, in 1843 and 1844, at New York City? No! *Governor's Island.*

The tables of mortality are arranged in four sets; 1st, of white females; 2nd, of white males; 3d, of black females; 4th, of black males. Each of these occupies *a separate series* of tables, with the months and ages, instead of the more convenient form of arranging them *together*, in separate *columns* only. In spreading them out over this almost interminable space, it would seem as if the principal object had been to make a fat job for the Corporation printer, a conclusion which is greatly strengthened on looking at pp. 818, 819 and 822, 823 (of the Doc.) and finding them *utterly blank*, except the form of the tables. Not a solitary figure stands up to relieve the eye in this desert of dots! dots!! dots!!! We have counted forty-six pages occupied with recording eighty-nine deaths. A large space, amounting in the aggregate to several pages, is used for recording the deaths of children under ten years of age, by *Childbirth, Paramenia, Ovarian Dropsy, Diseases and Tumors of the Uterus.* A larger space still is wasted for recording deaths of white MALES and black MALES, by *these same diseases.* There are, it is true, no deaths recorded in those columns, so we must conclude none occurred, but we do think the city should have been saved the expense of printing such disgraceful exhibitions of ignorance, and that those who recommended the late Inspector as a *medical man*, should be required to foot the bill. We observe also space left, in each separate series of tables, for recording deaths by *Old age, Delirium Tremens*, and *Intemperance* in infants *under one year and upwards*,—and by *Teething*, from the lowest age to *one hundred and upwards.*

The general summaries, or totals, so valuable in such reports to the statistical student, are very deficient, the most important being entirely omitted. Each inquirer after these must take his own slate and pencil, and figure them out.

Page 668 is taken up with a recapitulation of some of the Coroner's verdicts, all of which excited every possible interest when reported in the newspapers, at the time of their occurrence, and a majority of them having such importance as the following:—Run over by a horse, 1; run over by stages, 2; clothes taking fire, 2; falling from a wagon, 1; falling from the roof of a building, 1; falling from a ladder, 1; falling out of windows, 3; falling from a building, 1; falling down stairs, 1; falling through a scuttle, 1; falling of a grave-stone, 1; falling down stairs, 1; falling of a stove, 1; falling of a bank of earth, 1; falling of a pile of boards, 1; falling through a skylight, 1. What interest an enumeration of these different modes of *falling* may have to the professional or general reader we leave for their greater sagacity to determine.

The whole number of deaths reported for the year 1844, is 8955,—rather more than those of the preceding year, and less than those of 1842. Of these there were—white males, 4534; white females, 3903; colored males, 219; colored females, 219; total, 8955. The total of premature and still births was 828; total deaths exclusive of still births, &c., 8127.

We are told the white males exceed the females more than 16 per cent, and that the excess is on the increase. The relative number of still and premature births appears to be increasing, being 1 in 10.81, whereas for the previous ten years it averaged only 1 in 12.66. Query—how much of this may be attributable to the operations of Restell, Costello and Co.?

Deaths arranged under diseases of the nervous system, it is stated, are on the increase.

Cholera Infantum appears to have been less fatal than in previous years, and to have given place to hydrocephalus. The diminished amount of cholera infantum in the present year, even during the recent excessively hot weather, has attracted our own attention, fewer cases having occurred to us, and these generally more tractable.

"Convulsions, hydrocephalus, apoplexy, delirium tremens, and diseases of the brain, have each increased; of the 612 reported of convulsions, 417 were under the ages of two years, and this number doubtless embraces many deaths, the primary cause of which is not reported, and which, if the importance of the subject were duly considered by the attending physicians, might be accurately given."

Scarlatina, hooping-cough, croup, remittent and typhus fever show an increase of 250.

We have recently been surprised to meet with a fact gleaned from the last two annual reports of the three dispensaries.

In the year ending March, 1844, the number of patients prescribed for was - - - - - - -	54,282
In the year ending March, 1845, - - -	49,461
Less number prescribed for in 1845, - - -	5,821

This is a subject of earnest congratulation, and the causes of this improved state of health would form an interesting topic of inquiry. A competent officer, with official facilities of investigation, would doubtless have developed many valuable conclusions in connection with this circumstance.

This meager detail is all of importance we can glean from this comparatively ponderous tome. We look in vain for what we had a natural right to expect in the report on the mortality of the largest city of the western hemisphere; expositions of, and disquisitions upon, the *causes* of that mortality; but we forget that the learned committee, to whom was given the memorial before referred to, reported that the present incumbent might not be capable of writing a report on the philosophy of diseases, quite so learned and scientific as might emanate from the pen of more learned men; yet for all practical purposes he was equally, if not better, qualified for the duties, &c.

We sicken at the necessity imposed upon us of taking such a view of a document which should have elicited far different expressions; we tremble for the results, in observing the foul spirit of partizanship, which, not satisfied with destroying all that is fair and worth preserving in the civil and political part of our fabric, now attempts to lay its Vandal grasp upon the sacred temple of science, and disregards the first promptings of humanity, the first law of nature, the preservation of health and the protection of life.

Every document that reaches us from abroad, where the subject of vital statistics has gained great favor, and been productive of incalculable benefit to the physical condition of the people, makes us feel more and more ashamed of the devastating spirit which actuates all the political circles of this free and independent country. The good, the intelligent and the liberal, have the current of their virtues choked up by it; and instead of inducements offered for the labors and study of those, whose delight it would be to expose to the light the mysteries of life and death, which lie concealed in the deep recesses of human society, the moment such an one raises his head from the crowd, to divulge what he has learned, it is only to be a mark for the bullet of party warfare, and he is almost sure to be shot down. By whom, and when, shall time and talent be devoted to an exposure of our losses of character, of morals, of health and self-respect, by this infamous habit?—Who, indeed, could enumerate them?

The following shows how our mode of conducting public affairs is regarded by intelligent writers abroad. We quote from an Essay on "*the best modes of representing accurately by statistical returns, the pressure and progress of the causes of mortality*," by Edwin Chadwick, the well known Secretary of the English Poor-Law Commissioners, whose mind and hours are wholly engrossed with efforts to improve the sanitary condition of the population of Great Britain, and who is most nobly sustained by the Government:—

> "It would be a most useful field of statistical inquiry, in this as well as other countries, what is the expense in money, in sickness and mortality, at which such interests are sustained? Mr. Whitworth of Manchester has invented a machine, which, by the labor of one man and a horse, in ten hours, sweeps more cleanly a space which could only be swept in the same time by the labor of thirty or forty sweepers. He offers everywhere to sweep twice for the same sum, whatever it may be, that is now charged to the public for sweeping once. In only two or three out of the eighty petty jurisdictions into which the metropolis is divided, could he get even a trial of his machine, notwithstanding the demonstration of its success. The scavenger's interest everywhere overpowered the public interest in cleanliness and health, and even the immediate interests of the shop-keepers, in less dusty streets, and less destructive of furniture. He took out patents for the Continent and America. At Paris the *chiffoniers*' interest was found to be impregnable. New York is distinguished by the defective cleansing of the lower districts, in which the pig is the only scavenger. The condition of its streets has been lamented by Dr. Griscom, who has pointed out the great saving which might be produced by a better system: and Mr. Whitworth was at the expense of sending an agent to New York, in the full expectation of a success he had nowhere else met with; but the more the efficiency of the machine and the saving of labor were demonstrated, the more he was assured, by profound statesman-like men, that it would never answer for such a city as that. Was it in the form of the streets, or anything peculiar in their filth that a machine would not remove? Far from it; the machine would remove too much. Wherein then was the impracticability? The statesman's view was accidentally disclosed;—that it had NO VOTES: this was a country of universal suffrage, and a plan which, with every machine introduced, swept away thirty or forty dependent votes, 'would never answer.' No public man could be found to support it. Dr. Griscom, the inspector of interments, who had ventured to propose a system of cleansing, by which the patronage of 100,000 dollars per annum in bad cleansing would be saved, and who had opened to the citizens in an able report other mea-

sures of efficient improvement, has been himself swept away from his office by a change of parties, which always sweeps away indiscriminately whatever public administrative talent may have arisen under such circumstances. . . . . The moral atmosphere under which a population is so situated is as offensive and depressing and pestilential as the physical atmosphere under which it suffers; it is grievous to experience and melancholy to contemplate; still there are facts of promise; *we must hope and labor on*; and some of the most beneficial labors of those who are fortunate in being placed above and out of the reach of such influences, would be in the production of complete statistical returns, demonstrating, as they must do when complete, the enormous expense in money as well as in pain, sickness, and waste of life, which would make it worth while to buy off, on the most liberal terms, every existing interest opposed to the most certain measures of human improvement.

"If there could be intercommunication and simultaneous labors of statists in different places, based on local investigations, each might afford light to advance the labors of the others, and give to vital statistics a public estimation and use beyond any they have at present obtained."

The following statements from the same source—brief though they are, contain volumes for the study and reflection of our citizens in both public and private stations.

	Years.	Months.
"The average age of the white population living in New York according to the Census, is	23	3
"But the average of all who die there is only . .	20	0

"Thus we have an excess of deaths over the ages of the living of more than three years and three months; denoting, if the like excess prevailed from year to year, an increasing pressure of the causes of mortality. If the mortality be the same from year to year, the chances of life would appear to be lower in New York than in Dublin, where, according to the data given by the Census Commissioners, it is twenty-five years and six months. * * * * The cleansing and general sanitary condition of the American towns appears to be lower than in England or Scotland, whilst the heat there is greater, and the decomposition more active; pestilence in the shape of yellow fever, ague and influenza, is there more rife; the deaths in proportion to the population more numerous, and the average age of death (so far as there is information) among the resident population much lower. * * * * The adult population in America is younger than in England, and if the causes of early death were to remain the same, it may be confidently predicted that the American population *would remain young for centuries.*"

	Years.	Months.
"The average age of all alive above 15 in America is .	33	6
" " " " England & Wales is	37	5
" " " 20 in America is .	37	7
" " " " England is .	41	1"

If these statements are insufficient to rouse the statesman, the patriot and philanthropist to action, then are we dull indeed, and ill deserving the bounteous enjoyments of our political birthright.

To whom shall the people look for an exposure of the evils which destroy their health and shorten their lives, and who are entitled to be heard in calling upon governments for more attention to public sanitary measures, rather than the members of the Medical profession? They alone, by the nature of their acquirements and pursuits, can be expected to divert the shafts of ridicule and reproach pointed against ourselves and our governments, on these accounts. On them lies the responsibility of awakening the public attention, and which they should unceasingly endeavor to discharge, by their pens and daily conversation among men.

ART. XVI.—*Experiments on Febrile Caloricity, before and after death.* By B. DOWLER, M.D., in the Western Journal of Medical Sciences. 1844.

WE have perused, with great pleasure, the paper of Dr. Dowler, on "Febrile Caloricity, both before and after death," contained in the June number of "The Western Journal of Medicine and Surgery," published at New Orleans in 1844. It is encouraging to find the better class of physicians giving their attention to this important subject, which has been hitherto almost entirely neglected, or treated in a most superficial manner; for if we are destined to arrive at a thorough and practical knowledge of what really constitutes Fever, it must be grounded on enlarged views of animal heat under all circumstances, whether of health or disease. It has been ascertained by the observations of Currie, Cheyne, Fordyce, Philip, Magendie, Dr. Davy, Calhoun, Bouillaud, Donné, Cragie, Müller, Elliotson, Dunglison, Watson and others, that the temperature of the human body under the tongue varies from 104° to 109° during fever; but the cause of this preternatural heat has not been satisfactorily explained. According to some experiments of Jurine, Nysten, and McGrigor, more oxygen is consumed, and more carbonic acid exhaled, during the climax of fever, than in a state of health. And that respiration is actually augmented in many cases during fever, is rendered extremely probable from the fact that the circulation of blood through the lungs and general system is proportionably increased. But it is also certain, that the consumption of oxygen is often much diminished when the temperature is above the natural standard, as in many cases of typhus; and especially in pneumonia, consumption, &c., owing to a diseased state of the lungs. This also explains why it is, that in cases of phthisis, the blood exhibits a somewhat milky and oily appearance, which is manifestly owing to the manner in which the process of sanguification is impaired by ulceration of the lungs, in which chyle is converted into blood. As a proof that febrile temperature cannot be referred merely to augmented respiration, it is stated in the British and Foreign Medical Review, for July, 1839, p. 198, that "in a patient in St. George's Hospital, whose spinal column had been injured, the temperature rose to 111°; while the respirations did not exceed five or six a minute."

When treating the subject of febrile heat, Dr. Edwards observes:—"The circumstances are too complicated to admit of our deriving conclusions from them." (Influence of Phys. Agents, Part iv., c. 10.) With all due deference to the opinions of Dr. Edwards, the preternatural temperature of fever is readily and simply explained, if we admit that the natural properties of the blood are so far impaired during fever as greatly to diminish the nutritive process, during which, the caloric obtained by respiration is not transferred to the solids, in combination with arterial blood, as in the healthy state of the blood. The consequence of which is, that a great portion of the animal heat which, in the natural state of the functions, is employed in combining arterial blood with the tissues, is given out in a free state, and thus raises the temperature of the body above the normal standard. For the proofs that all the predisposing and exciting causes of fever actually tend to impair the nutritive properties of the blood, the reader is referred to a recent work on "Caloric."

But we must return to the observations of Dr. Dowler, who thinks that *post-mortem* fever affords conclusive proof that animal heat is not obtained exclusively by respiration. (Western Journal, p. 472.) He observes again, in the October number of the same journal: "These experiments are quite sufficient, if I may be allowed to judge, to overthrow the doctrine which ascribes the origin of animal heat solely to respiration." (P. 296.) Whence, then, is it derived? Is it "a product of all the vital functions," as mentioned by Bichat? If so, why is it that in some cases of cholera, recorded by Dr. Paine, and in so many cases of yellow fever, recorded by Dr. Dowler, the temperature was several degrees higher after death, when all the actions of life had ceased, than at any previous time? Or, if animal heat depends on the vital forces, and, like bile, gastric juice, &c., is elaborated from the blood, whence does the blood obtain it? what is the cause of vital force? and what is the use of animal heat? Physiologists should answer these plain questions, and not take refuge in a fortress of mere words without any definite meaning. That both the temperature and vital energy of animals in health are in proportion to the amount of their respiration during health, is established by too many concordant facts to admit of reasonable doubt. It has also been proved, by the observations of Davy, Dr. Dowler, and many others, that during life, whether in health or disease, the temperature of the body is higher in the lungs, heart, and brain, than the surface and extremities. But Dr. Dowler has clearly shown that, in cases of *post-mortem* fever, this law is reversed; that, in every instance, the temperature of the thigh, epigastrium, abdomen and liver, was higher than that of the heart, lungs, brain and axilla, from fifteen minutes to several hours after death. For example: when the chest and heart were 102°, the epigastrium was 105°, the liver and abdomen 107°, the axilla and perineum 109°; while, in some cases, the thigh was 113; proving that it is not the effect of respiration, like animal heat during life, nor of any of the vital actions, but the result of chemical combinations which take place in the body after the affinities of life are dissolved. In support of this view, we are not aware that any case of *post-mortem* fever has occurred at any other time than the heat of summer, when the air was from 74° to 86°, and sometimes 90°. In those of Dr. Dowler, it was always above 80°. And it is a fact worthy of special notice, that, in many cases of malignant typhus and yellow fever, chemical action precedes the entire extinction of vitality in the central organs, as proved by the offensive odor of the patient, and the dissolved condition of the blood. That chemical action should, under such circumstances, and with a temperature of the air above 80°, be developed, is nothing more than might be expected. When speaking of cholera patients in whom the temperature increased after death, Dr. Paine ascribes it to "cessation of the vital laws, which enables those that govern dead matter to operate, and to equalize the caloric already existing." (Letters on the Cholera Asphyxia of New York, 1832, p. 106.) And Dr. Dowler himself observes that "no explanation of the *post-mortem* heat can be drawn from the coagulation of the blood, rigidity of the body, &c., since the heat existed where they were absent, and the contrary." (Western Journal, Oct., p. 295.) Nor is it any argument against the views which we have proposed, that *post-mortem* fever commences before putrefaction, or the evolutions of ammonia and sulphuretted hydrogen; as it most probably results from the union of oxygen with the carbon and hydrogen of the blood and tissues, especially of the fat which abounds in the sub-cutaneous cellular tissue of the thigh, epigastrium, abdomen, pelvis, perineum, and axilla, where the temperature after death was found to be the highest. Should any one have a better explanation of the phenomena to offer, we shall be most willing to adopt it.

S. L. M.

ART. XVII.—*Lecture Introductory to a course on the Institutes of Medicine, in the University of Pennyslvania.* Delivered Nov. 5, 1844. By SAMUEL JACKSON, M. D., Philadelphia, 1844. Pp. 28.

THE author of this discourse is a gentleman of standing and distinction. He occupies in reality, the highest, most comprehensive, and most profound, because the most philosophical, chair, in the oldest and most celebrated school of medicine in the United States. As a teacher, he is said (and we believe correctly), to be rich in matter, and, in manner, exceedingly instructive and agreeable. His courteous, kind, and gentlemanly manners, moreover, render him a favorite with his classes, which are the largest and most influential in the country; and that he is also popular with them, as a writer, appears, among other testimonials, from the publication of this lecture. We are further assured (nor have we any reason to question the report), that he is accounted both skilful and able in the practice of his profession. A few years ago Professor J. was a professed disciple of Broussais, but that great man having passed away, and his doctrine being out of fashion, he is now rooted, for the time, in Professor Liebig's organ of "*Chemicality*,"—a cerebral instrument some time since devised and constructed by one of our most distinguished phrenological manufacturers. And from that source he derives, at present, his *notional nutriment.* As the fruit of this adhesion, and mental dependence, or at least in evidence of it, we find, in the ninth page of the pamphlet we are considering, the following paragraph, imbued with the very essence of the chemico-physiology of the German Professor.

"The phenomena accompanying the vital or organic actions, are the consumption of oxygen, the production of carbonic acid gas, and evolution of heat. There is no instant of life from the first commencement of the germination of the seed, or the hatching of the ovum, when these phenomena do not occur. There is a uniform proportion between the force of life, the activity of the vital or organic actions, and the quantity of oxygen that disappears, of carbonic acid generated, and heat evolved; the one may be taken as the measure of the other."

Such is a portion of the Professor's creed, *imported from abroad*, as well, we believe, as of that of the entire chemico-physiological school. For sundry reasons, however, although that creed may be regarded as a sample of the orthodoxy of the day, we deem its soundness, to say the least, exceedingly questionable.

How does the Professor reconcile his notion just stated to the well-known fact, that *living* forest trees, are, as an essential part of their vital economy, possessed of a *heat-producing, and temperature-maintaining power?* That when, in the winter, the atmosphere around them sinks to 40° of Fahrenheit—to the freezing point, or even to zero, their temperature uniformly continues higher, by from two and a half to three degrees? while the temperature of dead trees, of the same sort and size, is only *equal* to that of the atmosphere?

Will it be contended, conjectured, or even *fancied*, that throughout the entire trunks of the living trees, carbon maintains, by its union with oxygen, a perpetual fire, while, in the trunks of dead trees, no such fire exists? If in living trees oxygen and carbon chemically unite, carbonic acid gas is the product. Of that product then, what use or disposition is made? For it is never found either within or without, and around the body of the tree. Is it first formed in the process of warming the tree, and then absorbed in that of nourishing it? Such must be the alternate forms of action, if the carbon be consumed, and the gas generated. But neither of the two processes is known to take place. Even an allegation to that effect would, as we feel persuaded, be too absurd for the advocacy of any one possessing the slightest knowledge of the subject.

Nor is the temperature-preserving power of live forest trees the only phenomenon which it will puzzle Professor Jackson to reconcile to the dogma he so sturdily affirms. For the amusement of himself, and his con-disciples of the chemico-physiological school, and to test their skill in casuistry, we shall present him with a few more enigmas of the same sort; to whose solution, he and the fraternity to which he belongs are respectfully invited.

Let a thousand bushels of living and sound wheat, oats, or rye, be stored during cold weather, in a granary, adjoining an empty room of the same size and form, and equally impervious to the air around it. In three or four days after such storing, try the temperature of the two rooms, by a delicately sensitive thermometer, and that of the granary will be found to be the higher, by from one and a half to two and a half degrees. Such will be the never-failing result. Yet will there be found in the atmosphere of the granary no more of carbonic acid, nor less of oxygen, than in that of the empty room. In neither room therefore is carbon consumed, nor the constitution of the atmosphere in any degree altered.

There reside at present, in the city of Louisville, two women, aged about fifty-five years, each of whom weighs 350 pounds; whereas the weight of neither at the age of twenty-five, was more than 130. The body of each of them, therefore, consists of more than two and a half times as much matter, solid and fluid, as it did thirty years ago. Notwithstanding this, its temperature is as high now (98° Fahrenheit) as it was at that period; although, comparatively speaking, Professor Jackson's means of keeping it so have sustained a very striking diminution. The same amount, we mean of the calorifying agents, oxygen and carbon, has to produce two and a half times as much caloric. For it will appear presently, that the quantity of matter supposed to be productive of heat, has not been augmented in proportion to the augmentation of the quantity of matter to be heated.

As relates to the amount of food consumed by them, neither of the women referred to has ever been more than a *common* eater; nor has either of them ever indulged in the consumption of richly carbonaceous diet; and, in both quantity and quality, their food and drink are the same now that they have been at all times since their attainment of adult years.

The respiration moreover of those individuals being somewhat restricted in extent by obesity, and its acts in no degree more frequent than in time past, the amount of oxygen now inspired by them cannot fail to be diminished; while the quantity of carbonic acid discharged by the lungs and the skin, if not correspondingly diminished, is *certainly* not increased. And they both perspire more copiously in warm weather—one of them, as she assures us, much more so than she did when young; and neither of them suffers more than other women from the most intense cold experienced in our climate. Be it also observed, and held in remembrance, that, for the maintenance of the vast obesity of their bodies, each of those women must make daily, towards that effect, a correspondingly large appropriation of carbon. Nor does truth forbid us to add, that whatever parts of either our own or of foreign countries we have visited, in each of them, women, in all respects resembling the two foregoing ones, have been seen by us.

Admitting the facts just stated to be true (and their truth has been too frequently witnessed, and too strictly and conclusively tested, to be called in question) we are at a loss to understand how Professor Jackson, and his associates in belief, armed and aided by all the resources and powers of their school, can make it appear that the caloric evolved in the persons of the women just described, is the exact measure of either the oxygen inspired, the carbon consumed by them, or of the carbonic acid gas generated in their systems, and discharged from their emunctories. At least, if the measure be exact *now*, it must have been quite the reverse at a former period; and if it were exact in early life, it must be inexact now. On a subject so interesting and intricate, and by ourselves so little understood, we shall be pleased to be instructed, especially by those who may be *justly entitled* to speak of it with the confidence *assumed*, in relation to it, by the learned Professor.

If we are not mistaken, the economy of the whale is likewise altogether inexplicable on our author's hypothesis. Water is a powerful abstractor of animal heat; and it is of course more peculiarly so, when it is severely cold. Yet does the whale maintain a temperature of 105° amidst the icebergs of the arctic and antarctic seas. And this it does, when, compared to its enormous bulk and surpassing *oiliness*, its consumption of oxygen and carbon is exceedingly small. The reason of this limited consumption, especially of oxygen, is plain.

In comparison with its vast magnitude, the lungs of the whale are uncommonly diminutive; and the monster does not inspire atmospherical air more frequently than *once* in every fifteen minutes, and in some instances, as we are assured, after an interval considerably longer. It would be superfluous in us to say, that, under such circumstances, it is impossible for the whale to consume carbon, and to form and discharge carbonic acid gas in proportion to his immense bulk, and the incalculable aggregate of his vital action. If we mistake it not, his case is in direct and irreconcilable hostility to the notion of Professor Jackson. And that hostility is materially increased by the *fact*, that the favorite and customary food of the whale, especially of the *sperm* whale (the *oiliest* of the *race*) contains comparatively but *little carbon*. He subsists chiefly on some of the species of the medusa, a molluscous animal, whose *flesh* (if we may so call it) is *gelatinous*, not *oleaginous*, and therefore not *abounding in carbon*. If such be the fact (and naturalists assure us that it is so), where does the whale derive carbon sufficient to keep him warm, by combustion, amidst the icy waters of the arctic and antarctic seas? and at the same time, to form the immense amount of *fatty substance*, solid and fluid, which his system contains; and for which he is eagerly hunted in every ocean and every sea?

According to Professor Liebig's hypothesis of animal temperature, the food of the whale should be rich in carbon, for two purposes, equally imperious and equally obvious—the production of temperature, and the formation of fat. Hence, I repeat, are the economy and condition of the whale in open conflict with the chemico-vital notion of Professor Jackson. We shall only add, that Liebig himself furnishes us with all the means we need, to show the error of his hypothesis of animal temperature. He teaches us (see Animal Chem., p. 301) that, of all the tissues of the animal body, the gelatinous is the most meager in carbonaceous matter. Yet does the whale subsist on it almost exclusively, while his system contains, and according to Liebig requires, a greater proportional amount of carbon, than that of any other with which we are acquainted. All this clearly shows, as we have heretofore stated in another work, that Liebig is an utter stranger to zoology. Hence he rarely refers to that branch of science without committing some palpable blunder.

So is the whole economy of many, if not of all cold-blooded animals, which, as Professor Müller and other distinguished physiologists assure us, inspire "*three times* as much of oxygen, as they expire of carbon," in the process of respiration.

It is not true then, that in those animals, "there is a uniform proportion between the force of life, the activity of vital or organic actions, and the quantity of oxygen that disappears, of carbonic acid generated, and heat evolved." In the cases we have referred to, the uniformity of proportion affirmed by our author, is entirely wanting. And the same is true of many other cases that might be easily adduced.

One of the most striking and unaccountable blunders committed by Liebig and his retainers (to which corps of dependents Professor Jackson belongs) is the assertion, that, because their atmosphere is colder and denser, the hyperborean people inhale at each act of inspiration, a larger quantity of oxygen, than do the inhabitants of tropical and other climates. Nothing but a want of calm reflection on the subject, and severe examination and analysis of it, could have induced the Professor of Giesen to *make* the assertion, or his followers to *adopt* it as an article of their creed.

In the last postscript to a printed letter to Professor Yandell, entitled "The Replier replied to, and the Reviewer reviewed," we have given what we consider a fair exposition, and a complete refutation of the blunder in question. Forbidden, however, on account of its length, to introduce the postscript into this article, we must refer to the pamphlet containing it, such of our readers as may be curious to peruse it. But we are not yet done with Professor Jackson.

By far the most reprehensible fault committed by him in his pamphlet, is yet to be mentioned. It is in the following words:—

"A western author lately cited an eminent surgeon *as authority to disprove the existence of chemical phenomena in the animal economy.* On a surgical question, there could have been no better authority; but of what value could be the opinion of one who was ignorant of the simplest laws of chemistry, and to whom a chemical formula was an enigma on a purely chemical fact?"

The entire representation made by our author in this passage we assert to be *essentially untrue;* and we shall now offer the proof on which our assertion rests. Nor, armed as we are at all points, and fully master of our subject, do we entertain, as to the issue, a shadow of apprehension. And *confident* and *unqualified* as our readers may consider this language, we shall not fail to convince them that facts fully justify us in using it.

We are ourselves the "western author,' and John Hunter the "eminent surgeon," of whom Professor Jackson has spoken; and our reference to the high authority of Mr. Hunter was for an object totally different from what the Professor has represented it to have been. It had not the most distant connexion with any "chemical phenomena" either in or out of "the animal economy." It related exclusively to the *temperature-*

producing power of living forest trees. On that subject, we had, ourselves, experimented in the *United States*, and John Hunter had done the same in England; and we preferred the citation of his authority, in the controverted question, to the pledge of our own. And by neither him nor ourselves, was the slightest allusion made on the occasion, to anything in the nature or attributes of animals. To place this matter in a light which will admit of neither contradiction, equivocation, nor cavil, we need only quote from our "Physiology Vindicated," p. 38. There alone have we "cited" the authority of the "eminent surgeon" and our language is as follows:—

"On this subject" (the temperature-preserving power of living forest trees), though we have experimented ourselves, we give, on the present occasion, a preference to the experiments of another.

"John Hunter found, in England, when the temperature of the atmosphere was below 56°, that the temperature of living forest trees was several degrees *higher;* but that, during the prevalence of summer heat, the temperature of the trees was several degrees below that of the atmosphere. And we know, from experiments repeatedly performed, that the same is true of forest trees in the United States."

This last paragraph, the only one into which, as a "western author," we have introduced the name of John Hunter, needs no comment. It is of itself abundantly sufficient to affix on Professor Jackson, the discredit of a misrepresentation, as express and palpable as words can render it. There is not in it, as the reader perceives, the shadow of an allusion to "*chemical phenomena* in the animal economy." The allusion is exclusively to a *fact* in *vegetable physiology*, to the ascertainment of which no man has ever been more competent than Mr. Hunter.

Nor is it true that that illustrious philosopher was as ignorant of chemistry as Professor Jackson has discourteously asserted him to have been. Though he never made a *fixed and serious study, or a professional pursuit* of chemistry, either as a science, or an art, yet was he a contemporary of Black, Scheele, Cavendish, Priestley, Lavoisier, and other able and eminent chemists; and with some of them he had frequent and familiar intercourse. It is hardly *possible* therefore, assuredly it is in a high degree *improbable*, that he was so perfect an *ignoramus* as our author has represented him on the subject of a science for which they were so celebrated, and which, from its novelty and peculiarly interesting character, constituted the most attractive and agitating branch of knowledge of the time.

But, be this as it may, we have never, we repeat, made the slightest reference to Mr. Hunter, as authority for anything pertaining to animal chemistry. That, moreover, Professor Jackson knew when he asserted the contrary—provided he had read our "Physiology Vindicated," and if he had not read it, he was unwarranted in making any allusion to its contents. He is bound, therefore, in courtesy and gentlemanly observance, as well as in his regard for truth and justice, to rectify the gross mistake he has committed.

That we have criticised our author's writings with perhaps sufficient sternness and severity, not only in the *present article*, but also in *others*, which appeared in former years, in the *Lexington Medical Journal*, we do not deny. But we do deny that we have ever in any way misrepresented him. We have not charged him with a fault which he has not committed—with doing what he has not done, or with saying what he has not said. If we have, let the instance be specified to us; and, be it of what nature it may, the wrong shall be cancelled. And to ourselves, in a like case, we hold a like atonement to be equally due.

Hence, with a view to the *attainment* of our due, we have here both stated and proved, that on a public and official occasion, the Professor has acted toward us with deliberate and unqualified injustice, if not *misrepresentation.* As a man therefore, who wishes to continue of fair repute, as a gentleman, and as a public teacher, whose duty it is to inculcate truth alone, as far as it may be known to him, we have a right to demand and expect of him, that, on an occasion equally public, and in a manner equally solemn, he will revoke his groundless and offensive imputation.

C. C.

Louisville, Ky.

Art. XVIII.—*Lectures on Subjects connected with Clinical Medicine, comprising Diseases of the Heart.* By P. M. Latham, M.D., &c. In 2 vols. Vol. I. London, 1845. 12mo. pp. 374.

Great attention has been paid within the last few years to the study of the pathology and diagnosis of disease, with the effect of greatly enlarging our knowledge of these important subjects. But have they not been pursued at the expense of practical medicine? How often do we find, especially among the younger class of practitioners, those who are capable of specializing and localizing disease;—who have ample skill in detecting its existence and seat in the living body, but who have very little knowledge as to the most appropriate and successful methods of removing it? And yet this latter is, or ought to be, the end and aim of all other kinds of knowledge. When we have looked at the French school of modern pathologists, and seen how comparatively barren of practical results their minute inquiries and investigations have been, we have almost been led to deny the utility of such researches, or, at least, to fear that there is something in the study of pure pathology, which unfits the mind for the details of practice, and the cultivation of clinical medicine. The cultivation of these branches requires, perhaps, as Mr. Latham has suggested, a different species of talent—a different habit of mind from that required by clinical medicine, as well as of taste. Some minds, and those not of the higher order, will excel in a science of pure observation, where the reasoning faculty is not called into exercise, nor the power of analysis or generalization needed—where one thing only is studied, and that with little or no reference to other things. Such is pathological anatomy—a science which requires close observation, good eyes, and a tolerable memory, but which makes few demands upon the higher faculties. Such is *not* practical medicine. This is the most difficult and recondite of all sciences. The phenomena with which it deals; the laws with which it is concerned; the processes and the functions with which it is associated, all are wrapped in more or less mystery; none of them are completely understood; all require the highest order of intellect to penetrate or unravel. Hence the reason that there are so few eminently skilful physicians to be found; it is because preeminent talent is equally rare. Great talent has always been supposed, and truly so, to be necessary to the successful command of a great army; but here is an army of diseases, almost innumerable; insidious, latent; secretly, but none the less certainly, sapping the foundation of vitality; or suddenly overwhelming it by an open and violent attack; foes, before which a Cæsar and a Napoleon had to bow, while yet in their prime; and which sweeps away the successive generations of men. Who can doubt that successful opposition to such enemies demands the exercise of mental powers, equally great as gave success to the arms of these mighty conquerors? When we consider the great difficulty in our art, in tracing effects to their true causes, and causes to their true effects; how liable to disappointment we are in producing certain results, even after we have discovered the true relations and tendencies of things; and what obstacles oppose us in applying to new cases the knowledge which we have acquired from observation; when we reflect that to practise medicine successfully, presupposes the acquisition of an extensive collection of well authenticated facts; their arrangement, classification, combination, or separation; the tracing out among them the relation of cause and effect; and lastly from them, the deduction of general facts or principles; when all these things are taken into consideration, we shall no longer wonder at the want of success so often observed in the practice of medicine. Remedies misapplied are *poisons*—poisons properly administered are powerfully remedial; whether they prove one or the other, depends entirely on the judgment of him who administers them. One man condemns *mercury*, and solely because he knows not how to use it; just as a monkey might get a prejudice against fire, or an edge tool, because he burnt himself with one, and cut himself with the other. Another sets himself up as a reformer, denounces bloodletting and all who practise it, and professes to cure all diseases by infinitesimals; or quinine and prussic acid. Just as wise and rational is this, as if a musketoe, whose range of observation extends but an inch from the end of his proboscis, should turn up his snout at the eagle, and deny that the bird of Jove can see any further than himself!

These considerations should teach us humility and forbearance—"non omnia possumus omnes." Men may be equally honest; equally sincere; equally desirous of benefiting their fellow-men; but they are differently endowed; their minds are differently constituted: they do not look at nature through the same media; they arrive at different results, from occupying different points of observation; they do not equally profit by experience; they cannot turn the same facts to equally profitable account. D'Alembert tells us of an eminent physician, who renounced the practice of medicine, after following it for thirty years, with the remark, "I am wearied of guessing"—just as we see men now a-days, abandoning the regular practice of their art, become converts to some new-fangled system, and denounce what they once praised, or at least practised, without manifesting any qualms of conscience. Now, it is charitable to believe such individuals made a grand mistake in setting out in life; they mistook their calling—nature designed that they should labor with their *hands*, not their *heads;* a false ambition led them to aspire to what their Creator had placed beyond their reach; the feeble glimmerings of reason, at length, light upon their twilight path, and by the aid of the fire-fly illumination, they discover that they have missed their way—they renounce their profession, or what is still more likely, fall into some of the by-paths of quackery, and end at last by exclaiming, "I am tired of guessing!" It would have been better for mankind had they never undertaken to guess.

Here is a work which thoroughly recognizes the true principle, that the *treatment* of diseases is, in fact, a part of their pathology. We hardly know which most to admire, the admirable purity and simplicity of the style, which eminently entitle it to rank high among the few medical classics of our language, or the appositeness and force of the author's illustrations and reasonings. The work is not a complete essay on the subject of which it treats, as the writer only aims to regard diseases of the heart in one point of view, namely: as they appear in the living man. (This, however, includes the several objects of their chemical diagnosis, their chemical history, and their medical treatment. The other parts of the subject are omitted, as of less importance; and with which the reader is presumed to be already sufficiently well acquainted. If the work is incomplete, it is, therefore, designedly so; but this very feature has rendered it, if anything, more attractive to us. We are content to look for the details of pathological anatomy, in Hope, Andral, or Copland.

There are very few medical publications that we can take up and read through continuously without fatigue. But this is an exception. We will not say that it has all the interest and freshness of a novel; for novels have no attractions for us,—but it has *that* in it, whatever it be, that pleases the taste, while it satisfies the thirst for knowledge; that makes the eye hasten from one sentence to another, as if greedy for the pleasure in anticipation; in short, that keeps a working man from sleep at night, after the toils of daily labor, with the temperature at 98° in the shade. As the work is speedily to be issued from the press of the Harpers, we shall omit an analysis of its contents till re-published here.

ART. XIX.—*The Encyclopædia of several thousand Practical Receipts, and Collateral Information, in the Arts, Manufactures, and Trades, including Medicine, Pharmacy, and Domestic Economy. Designed as a Compendious Book of Reference, for the Manufacturer, Tradesman, Amateur, and Heads of Families.* By ARNOLD JAMES COOLEY. Illustrated with numerous engravings. D. Appleton & Co., New York. No. 1., pp. 104.—1845.

THIS appears to us to be the most correct, comprehensive, and conveniently arranged manual of reference on the subjects ot which it treats, that we have ever met with. It contains directions for the preparation of many thousand articles of interest and value, together with their properties, uses, and doses, and generally the means of ascertaining their purity, and attesting their presence in other compounds, besides a derivation of their names, and short historical notices, thus rendering the work self-explanatory. The arrangement is alphabetical, so that every article may readily be found.

Art. XX.—*Elementary Chemistry. Theoretical and Practical.* By George Fownes, Chemical Lecturer in the Middlesex Hospital Medical School, &c., with numerous Illustrations. Edited with additions, by Robert Bridges, M.D., Professor of General and Pharmaceutical Chemistry in the Philadelphia College of Pharmacy, &c., &c. Philadelphia: Lea & Blanchard, 1845.

This is a very excellent manual for the use of students and junior practitioners, being sufficiently full and complete on the elements of the science, without omitting any necessary information, or extending too far into detail. It is written in a clear and concise style, and illustrated by a sufficient number of well executed wood-cuts and diagrams. The Editor has executed his task in a creditable manner, and we have no doubt the work will prove entirely satisfactory as an introduction to the science of which it treats.

Art. XXI.—*A Dictionary of Practical Medicine: comprising General Pathology, the Nature and Treatment of Diseases, Morbid Structures, &c.* By James Copland, M.D., F.R.S. Edited, with additions, by Charles A. Lee, M.D.—Nos. IX., X., XI.

The republication of Mr. Copland's great work has now reached its eleventh number. Hereafter one number will appear about every six weeks, or two months, till completed, as far as published in London; and it is expected that but a few months will elapse before the entire work is finished. The editor is gratified at the manner in which his labors have been received by the profession, and if health is continued, his efforts will not be relaxed. The patronage given to the work has exceeded all expectation. It is believed that not less than two thousand copies are disposed of soon after publication. The work is stereotyped, and printed in a new and enlarged type, on the finest linen paper, the same as used for Harpers' Pictorial Bible. Those who wish a complete medical library will do well to secure a copy.

Art. XXII.—*The Principles and Practice of Dental Surgery.* By Chapin A. Harris, M.D., D.D.S., Professor of Practical Dentistry and Dental Pathology, in the Baltimore College of Dental Surgery, &c. Second Edition; revised, modified, and greatly enlarged. Illustrated by 69 wood Engravings. Philadelphia, 1845.

To Dr. Harris justly belongs the credit of having prepared one of the best works on Dental Surgery hitherto published in our country. A thorough elementary treatise on this subject was much needed, as a textbook for the student, and a guide to the more inexperienced practitioner;

and the present seems fully entitled to that character. After giving a very interesting and well written sketch of the progress of dentistry in the United States, the author devotes a chapter to the "importance attached to the human teeth, and customs concerning them," which embodies a great amount of curious and interesting information. He then proceeds to a description of the "Anatomy and Physiology of the Mouth," comprehending the "Organs of Prehension, Organs of Mastication, of Insalivation, and of Deglutition; the Blood Vessels of the Mouth, Nerves of the Mouth, Origin and Formation of the Teeth, First and Second Dentition, Irregularity of the Teeth," and in short, all the subjects usually published in a complete treatise on dental surgery. We regret that we have not space for extracts; we may hereafter give some passages with which we have been particularly interested. We cheerfully commend the work to the attention, not only of the profession, for which it was particularly prepared, but also of the practitioner of medicine, who will often be benefited by having such a work in his library to consult.

Art. XXIII.—*The Dispensatory of the United States of America.* By George B. Wood, M.D., Prof., &c., and Franklin Bache, M.D. &c. Sixth Edition, carefully Revised. Philad., 1845.

This work is too well known to need any recommendation at our hands. The additions to the last edition have not been very extensive, because the work was then comparatively complete, and embraced everything wanting to meet the wishes of the medical and pharmaceutical community. As the standard work on the subject of which it treats, it redounds greatly to the credit of its authors, and to the medical literature of the country. It is alike indispensable to the student, practising physician, and the pharmaceutist.

Art. XXIV.—*The Botanical Text Book for Colleges, Schools, and Private Students: comprising Part I., an Introduction to Structural and Physiological Botany; Part II., the Principles of Systematic Botany, with an account of the Chief Natural Families of the Vegetable Kingdom, and Notices of the principal useful Plants. 2d Edition, Illustrated by more than a thousand engravings on Wood.* By Asa Gray, M.D., Fisher Professor of Natural History, in Harvard University. New York: Wiley & Putnam. 1845. 8vo., pp. 509.

The Science of Botany has peculiar claims on the attention of medical men, and this is one of the best introductions to the study that has hitherto appeared in our language. The first edition was a very excellent work, but this is far superior. The first part, relating to Structural and Physiological Botany, has been enlarged to nearly twice its former extent, having been almost entirely re-written, and rendered more simple and generally intelligible than before. The chapters upon the principles of classification, and of the natural system, have also been recast and somewhat extended. The number of pages has been increased about one-fourth, and the illustrative wood engravings have been doubled. It is undoubtedly the best treatise on physiological botany accessible to the American reader.

Art. XXV.—*A Valedictory Address, delivered by* G. S. Bedford, A.M., M.D., Professor of Midwifery and the Diseases of Women and Children, in the New York University; on the evening of Feb. 28, 1845. Printed for the Class. 1845.

It is our purpose to notice all official published discourses, emanating from the two medical schools of our city, and should we fail to do so, we trust it may be attributed to other causes than intentional neglect. In relation to the present discourse, we would state that a notice prepared for our March number, and sent with other manuscripts to the printer, was accidentally crowded out by matter already in type, and at too late a period to supply the omission.

The discourse of Prof. Bedford is chiefly occupied in matters connected with the present condition and prospects of the medical department of the University. From it we learn that the first Session of Lectures in 1841–2 opened with 239 Students—that of 1842–3, with 291—that of 1843–4, with 325—and the last, 1844–5, with 378; thus showing a very flattering progress, and one almost unprecedented in the history of medical schools in this country.

The advantages which New York affords for pursuing medical studies are very fully set forth, and the author boldly avows his aim, and that of his associates to be "the creation of a national medical school, which shall meet the wants of the profession, and confer honor on the country." This shows a laudable ambition, and one not satisfied with moderate attainments, or doubtful success. Our limits will allow but a single extract, which furnishes, however, a very good illustration of the spirit and style of the discourse.

> "Before drawing this address to a close, I desire to make a few observations in reference to your position as students of this University. There is not a State or territory of this great confederacy, which is not represented here this night. The sons of the North have met their brothers of the South, as have those of the East and the West. Wisconsin, Oregon, and Iowa, are also represented; and even Texas, at this moment the exciting topic of political controversy, has not forgotten us. Canada, Nova Scotia, the West Indies, and England, too, have sent on their respective delegates. Nearly four hundred gentlemen, coming from various countries and sections, their minds imbued with prejudices peculiar to each, would not, it might be supposed, readily assimilate. Sectional influences, and the impress of education, are calculated to awaken feelings by no means congenial to the spirit of harmony and friendship. But such influences have found no foot-hold here; and experience has shown that the elements of discord and the bickerings of party can neither live nor become developed in this Institution. You are here a band of brothers, engaged in the attainment of a common object, and devoted to a common interest. The fraternal feelings which you have exhibited towards each other, have not escaped the observation of the Faculty; and it is a subject of congratulation to all of us interested in the prosperity of this school, that the members of the class of 1845 separate in kindness and friendship for each other, with sentiments of respect and attachment to each other; and with a consciousness that these feelings are most sincerely reciprocated. You are now about to return to your homes, to receive from your parents and friends the testimony of their approbation; and when you reach the paternal roof, you will gladden the hearts of those who have watched over your infancy, and have looked to the period of your manhood with feelings of anxiety, which a parent's heart alone can experience. See that you do not disappoint their hopes; suffer not yourselves to relax in effort; and remember that he who would rise to fame and distinction, must labor with an energy and a determination equal to the object to be achieved."

ART. XXVI.—*The Principles of the Chrono-Thermal System of Medicine; with the Fallacies of the Faculty, &c.* By SAMUEL DICKSON, M.D. First American, from the Third London (People's) Edition; with an introduction and notes. By WILLIAM TURNER, M.D., late Health Commissioner of the City and County of New York, Member of the New York Medical Society, &c. New York: 1845. 8vo. Pp. 228.

THE author of this *tirade* has a reputation which we do not covet. In London, he appears to have made himself quite obnoxious by his indiscriminate slanders upon the profession, and, it would seem, not unsuccessful attempts to disgrace it in the eyes of the community at large.

As far back as 1838, we recollect that, upon the resignation of the eminent Dr. Conolly, as physician to the "Cheltenham Dispensary and Casualty Hospital," Dr. D., who had recently resigned his situation in the army, published an "Address to the Governors and Subscribers," in which he said—"I will in no case show a lack of knowledge of the better resources of my art, by abstracting the life-blood of the poor, whose diseases, for the most part, spring from defective food and vitiated air." From that time to this, Dr. D. has been incessantly harping on the dangers of blood-letting, and has succeeded in creating quite a *sanguiphobia* among a certain weak-minded class. The same objections, and even stronger, exist against his own favorite remedies, *arsenic, prussic acid, and mercury*, as, indeed, he admits in the following passage, which covers the whole ground:—

> "That none of these are without danger in the hands of the unskilful, I admit; and that some of them, *mercury, &c.*, for example, have, from their abuse, sent many more to the grave than they ever saved from it, is allowed by every candid and sensible practitioner. *But that was not the fault of the medicines, but of the men who, having prescribed them without properly understanding the principles of their action*, in the language of Dr. Johnson, 'put bodies, of which they knew little, into bodies of which they knew less.'"

So we may say of blood-letting. It is, no doubt, often abused, and what remedy is not? But to say that it can never be beneficially employed, is an admission on the part of the objector that he lacks ordinary sagacity, and does not understand the plainest principles of his art. That a mode of treatment, that has been in use from the most remote antiquity; that has, as it were, by intuition or instinct, been employed by uncivilized nations for the relief of various maladies; whose benefits have been acknowledged by all medical writers, and all accurate observers in every age; which still maintains its ground against the cavils of the interested and the prejudices of the ignorant; a remedy to which many are often compelled to resort, even in opposition to their theoretical views, and the principles of the medical systems they have adopted,—that such a remedy is now to be cried down and banished from the world by such books as this, is about as probable as that sickness itself is about to disappear from the earth.

Dr. Dickson calls his system, the *Chrono-Thermal System;* it might as well be called the *Chrononhotonthologus* System—either term will answer as well for the class for whom it is invented. "*The type of all disease*," we are told, "*is one and identical;*" *and this type is fever and ague, or intermittent fever!* Medicines, which are also called *chrono-*

thermal, are said "to act primarily on the brain, and thence *electrically*, or *magnetically*, through the system." In all cases "they affect temperature, or motion—change in one never taking place without the other." Because diseases are generally subject to exacerbations and remissions, they are said to be nothing more nor less than *intermittent fevers;* and all we have to do to cure them, is to shorten the hot stage—cut short the cold stage—and prolong the intermission. The modesty of the author will appear from the following quotation: "Up to 1836, when I first published the heads of my system, the profession, to a man, were utterly ignorant of the very nature of disease. Its periodicity in the case of ague, and a few other disorders, they knew; the periodicity of all animal movements, whether in health or disease, they knew nothing at all about; and of the mode in which remedies act, they were just as ignorant."

The American editor, whose name we sincerely regret to see in such a connection, has introduced the work to the public, in a short introduction, in which he sets forth the system of Dr. Dickson in very favorable colors—expresses his repugnance to the letting of blood, and says that the "*chrono-thermal* doctrines tend to make *short work of disease*." This we fully believe, but we apprehend it is by making short work with the life of the patient. A case of acute inflammation of any of the vital organs, treated by *quinine*, *arsenic*, and *prussic acid*, would doubtless establish the truth of this remark beyond all cavil. We did not take up this book, however, with the view of analyzing it, or of combating either the theory or the mode of treatment recommended in its pages. We regret its publication on many accounts. It is written in bad taste, it abounds in harsh invectives and unfounded accusations against the profession, and without convincing the general reader of the truth of the author's own system, will, so far as it has any effect, serve to weaken, if not destroy his confidence in all practitioners of the healing art. Got up for a particular purpose, it has probably accomplished its end, and should be allowed to descend to the tomb of the Capulets, where it is rapidly hastening, with no other requiem than the sighs of its unfortunate victims.

Art. XXVII.—1. *The Twentieth and Twenty-first Annual Report of the Officers of the Retreat for the Insane at Hartford, Conn.* 1844, 1845. 8vo. Pp. 32—24.

2. *Report of the Joint Select Committee to whom was referred that part of the Governor's Message which relates to the Insane Poor.* Mass. Session, 1845. Document No. 11, 1845. Pp. 14.

We are indebted to the able superintendent of the Connecticut Retreat, Dr. John S. Butler, for the above documents, from which we learn that the Institution under his charge is still successfully accomplishing the important ends for which it was established. Since its establishment, twenty-one years ago, over 1400 persons, laboring under different forms of mental disease, have been admitted into the Institution, of whom 800 have been restored to reason.

At first the "Retreat" contained rooms for only fifty patients, with their attendants, including accommodations for the steward, matron, and other officers; the expense of which was about $20,000. Eight years afterwards, the building was so enlarged as to furnish accommodations for 100 patients. Recently, two wings have been added, at an expense of $22,000, which will accommodate 100 additional patients, and a new house erected for the superintendent and family. The Institution can now receive 200 patients, and the whole expense of lands, buildings, and other improvements, somewhat exceeds $65,000—an example of economical expenditure, so far as we are acquainted, without a parallel.

Of the $65,000 which the Institution has cost, $18,000 were given as donations by individuals; $40,000 were raised by lottery; $5,000 presented by Mr. Israel Munson, of Boston, and $5,000 were given by the State when first established, and recently, $5,000 more has been added, being $10,000, or about one-eighth of what has been expended. In 1843, the Legislature granted $2,000 a year, for the term of five years, "to be repaid, by support of insane persons placed in the Retreat." This was merely a loan which is in course of being repaid to the State at the rate of $2,000 a year. This is all that has been done by the State of Connecticut, for its insane poor, and a great proportion of them still remain unprovided for. These facts are derived from the Report of the Select Committee, to whom this subject was referred. When we consider that about 90 per cent. of all recent cases of insanity are cured in our public Institutions, and that very few recover, when supported by the towns to which they belong, it would really seem, that as a matter of economy, if on no other grounds, the State would provide for their treatment in an establishment expressly adapted for this purpose. That time, we trust, is not remote.

From the Report of the superintendent we gather, that 188 patients have been treated in 1844, of whom 105 were admitted during the year—of these 45 were discharged cured, 14 much improved, 6 improved, 9 not improved, and 11 died—making a total of 85 discharged, and 103 remaining in the Institution.

The Report of Dr. Butler is brief, but judicious and sensible, and confirms what we learn from other sources, that the Retreat under his management is prosperous and successful.

PART THIRD.

Foreign Medical Intelligence.

ANATOMY AND PHYSIOLOGY.

1. *On Restoration of Nervous influence in Autoplasty.*—Dr. A C. Jobert de Lamballe read a very interesting Memoir before the French Academy of Sciences on Feb. 10th, 1845, on the "Restoration of Nervous influence in Autoplasty," and which is published in the *London Medical Times* of May 10th, 1845. We can only find space for the concluding portion of it.

From the numerous facts observed on man and confirmed by experiments on animals, the following conclusions may be drawn. 1st. That immediately after autoplastic operations, sensibility is diminished or disappears in the flaps, and this is in a direct ratio with the loss of blood. 2d. That before the division of the pedicle, sensibility is retained, if not entire, at least in part. 3d. That a certain time after this division, vascularity and insensibility re-appear simultaneously in the flap, and increase in an equal ratio. 4th. That in many cases, the vascularity is very great in the flap, and then sensibility is developed in an equal degree.

On the other hand, those furnished by anatomical examinations are. 1st. That antoplastic flaps, after the division of the pedicle, are isolated on all sides from the surrounding parts by a layer of tissue in the cicatrix. 2d. That the only means of communication which exists between the flap and the remainder of the organism are the more or less developed vessels which traverse the cicatrix; no nervous filaments are to be seen. 3d. That the nerves which previously existed in the flap become atrophied and may even entirely disappear. 4th. That the nerves of the surrounding parts do not extend beyond the cicatrix. Sometimes they terminate abruptly, offering a sort of neurilematic tumor; at others, they may be traced into the cicatrix, but *never beyond.*

This physiological observation teaches us that sensibility re-appears in the flap, and anatomy proves that the nervous continuity is not restored. How can this continuity be produced in a part entirely separated from the nervous centres? How can the sensations produced in this part be transmitted to the central portions of the system through a tissue deprived of nerves? These two questions are related to the highest and most mysterious physiological acts, and though I do not pretend to be able to elucidate them completely, still I think the two following propositions may be advanced, as the exact expression of the facts contained in this memoir. 1st. The autoplastic flaps receive in a direct manner, the elements of their sensibility from the globules of blood which nourish them. The development of the sensibility is regulated by, and increases or diminishes in an exact ratio with the quantity of the globules which reach the flap. 2d. The sensations produced in the flaps are transmitted to the nervous centres by the extremity of the nerves which surround the cicatrix, and reach these extremities through the medium of the tissue of the cicatrix, though this part contained no nerves.

I will quote in support of the first of these propositions, the following theory. It has been proved by MM. Dumas and Boussingault that respiration is a genuine chemical combustion. Now this chemical action cannot take place without electricity being developed, and hence the origin of animal electricity. When the muscles are full of blood, there is a local combustion, causing a development of the electric fluid in sufficient quantity to be appreciable. In rendering respiration more active, the proportion of animal electricity is augmented. *It increases in a direct ratio with the activity of the circulation.*

Now may it not be concluded from these researches, that the dynamic-electric fluid, produced by the chemical phenomena of the circulation, is the source of sensibility, and that the nerves merely transmit the impression to the nervous centres? And does not this induction contain the phenomena observed in the autoplastic flaps! In fact, sensibility, though more feeble, exists in the flap until the pedicle is divided, after which it disappears completely, to be restored as soon as the circulation is reproduced in the flap, and its development is in a direct ratio with the energy of the circulation. But how does the sensibility, developed by the phenomena of circulation, transmit the impressions which are received to the brain? It will not be uninteresting to prove that this fact, however extraordinary it may appear at first sight, forms part of an ancient theory which obtained, about half a century ago, from the experiments performed by a member of the Academy, an authority which no one will gainsay.

The idea of an appreciable atmosphere surrounding the nerves and the muscles, was announced first at the school of Edinburgh, to the great scandal of the partizans of the Brunonian system, which was then predominant in Scotland. Taken up and developed by Reil, who formed from it a theory, it was finally established and demonstrated by the experiments of M. de Humboldt. In his admirable researches on galvanism, this eminent *savant* placed beyond a doubt the following facts, viz., that animal matter exercises an influence at a distance—that there emanates, from the nerves especially, a fluid appreciable to our instruments; that the distance at which this fluid acts is always in a direct ratio with the degree of vitality of the animal, and decreases in proportion to the time which has elapsed since death took place. M. de Humboldt, while performing his experiments on hogs, perceived that the nervous atmosphere produced appreciable results at a line and a quarter from the divided extremity of the nerve, and that it persisted from five to eight minutes after death. These experimental facts lead us to conclude that in man, in the plenitude of his vital power, the effects of the nervous atmosphere must be far more powerful and extensive.

M. de Humboldt has also demonstrated that the cellular tissue which forms the base of the cicatrix of the nerves, is a good conductor of the fluid just mentioned.

What therefore is wanting to explain the phenomena of transmission described in this memoir? I performed my operations on individuals endowed with energetic vital powers. The circulation of the nervous fluid interrupted by the operation, was restored by means of an intermediate conducting tissue, and the functions were re-established by the efforts made by nature—facts which cannot now be called in question. Thus the propositions which I have advanced may not only be considered as the rigorous deduction of the facts observed, but if I am not mistaken, they are in accordance with the best established physiological data.

It would be easy, in founding our opinions on those of MM. Serres, Velpeau, Lallemand, and Beclard, on embryogeny, and comparative anatomy, in taking advantage of the researches of micographs on the phenomena of capillary circulation, and the valuable lectures of Professor Dumas on the production of animal electricity, to show that nature, in restoring, as I have admitted, vitality and sensibility in autoplastic flaps, does not wander from the method it follows, to create and maintain sensibility in all organized beings. I merely point out this new subject to the attention of physiologists, my intention in this memoir being only to submit to a rigorous analysis, and to verify by anatomical investigations, facts hitherto but little studied, and which may throw great light on various important physiological questions.—*Medical Times, Feb.* 10, 1845.

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2. *On Hypnotism and Mesmerism, by J. Baird.*—[Mr. James Baird, a surgeon of some distinction, who has been writing a series of articles in the *London Medical Times* on the subject of *Magic*, *Mesmerism*, *Hypnotism*, &c., sums up his creed in the following distinct propositions, all of which he defends at great length, and with marked ability.]

"The result of this investigation seems to warrant the following conclusions:—

1. So far as can be traced, the Magi of Persia were the first who, by artificial contrivance, for religious purposes, threw themselves into a state of self-hypnotism, or ecstatic trance. 2. That for the accomplishment of this, they resorted to means essentially the same as those which observation and experience had led me to adopt for the like purposes—and that, without any knowledge on my part of their notions or practice—namely, by fixing the sight and thoughts on an object, and suppressing the respiration. 3. That whilst there is this remarkable coincidence between their notions and practices and my own, as far as regards the induction of the sleep and various phenomena—proving the influence to be a *subjective* or *personal influence*—our notions about the *ulterior phenomena* are entirely different. In this point their notions rather coincide with those of the mesmerists. 4. That whilst I do not believe in the existence of a magnetic fluid, or special influence passing from the operator to the patient, as the cause of the *sleep and general phenomena*, I admit a certain degree of efficacy to the mesmeric passes and manœuvres, in modifying the ulterior results, through physical and mental influences, as explained at length in a former paper. 5. That from Persia, self-hypnotism found its way into India, about 500 years before Christ, and subsequently into every other country. 6. That it has played an important part in their various religious practices, in the oracular predictions, and other services of the temples, and for the cure of disease, amongst the Egyptians, Greeks, Romans, and latterly, with various modifications, throughout Europe and the whole habitable globe. 7. That an analogous condition of the nervous system, accounts for the Egyptian magi, Dr. Dee's crystal-seeing, the vigilant experiments of modern mesmerists; for various eruptions of fanaticism, and superstitious delusions and visions. 8. That with such a mass of evidence as is afforded by these eastern devotees for the last 2400 years, in addition to what has been realized and recorded of the practices of other countries, superadded to all which has been realized in Europe, especially since the days of Mesmer; it is neither rational nor philosophical, for those ignorant of the subject, to deny the reality of the sleep and general phenomena, without a candid investigation of the subject by experiment and observation. 9. That, at one stage of the sleep, there is extreme exaltation of the organs of special sense, especially of hearing, smell (probably also of taste), touch, resistance, heat, and cold, and electrical impressions, and particularly as regards currents of air. 10. That, owing to this they are capable of receiving impressions through the *ordinary media*, which would be quite inappreciable during the waking condition. 11. That I attribute phenomena to exalted function of natural organs, enabling them to perceive *faint* impressions through the *ordinary media*, which the mesmerists allege to result from some peculiar and impalpable medium, through which their unexpressed thoughts, knowledge, and desires are imparted from the mesmeriser to the mesmerisee, as by a species of inspiration or sympathetic reflection. 12. That the concentrated and quickened state of the mind may also enable them, occasionally, to trace out the natural bearing of events and circumstances with more adroitness than they could when awake. 13. That the extremely vivid state of their imagination leads them to believe as reality, whatever ideas are suggested to their minds; and their extreme docility, sympathy, and irritation, induce them instantly to manifest themselves as actively engaged in the scene so vividly portrayed before their fervid imagination. 14. That the notion of spiritual alibis, the soul leaving the body on voyages of discovery to the uttermost parts of creation, seeing through opaque bodies, correct thought-reading, universal lucidity, and a host of omniscient and omnipotent attributes, are mere delusions—being nothing more than vivid mental pictures of dreams. 15. That the senses may not only be abnormally quickened, as is the case at one stage; but, at another, they may be rendered so torpid, as to be quite unimpressionable to mechanical or chemical stimuli. 16. That by judicious management this influence is capable of being rendered a powerful therapeutic agent, either exciting or depressing the natural functions in an extraordinary degree. 17. That this is accomplished chiefly through the law of concentration, and mental impression, changing physical action, according to the quantity and quality of the blood passing through any particular organ or part in a given time. 18. That even in the normal waking condition, by directing

the *attention strongly* to any particular part, organ or function, the sensation, circulation and function will be thereby excited. 19. That directing the attention strongly in any particular direction, or to any particular organ or function, we may thereby suspend pain, and depress the function of some other, or distant part. That owing to the particular condition induced by hypnotism, both as regards the mind and body, the effects of *attention exciting* or *depressing function*, can be rendered far more efficient than in the waking state. 21. That this influence may be rendered available in rectifying *mental*, as well as *physical disorders*. 22. That the power of mental and moral impressions to influence physical action, plays an important part in *every* mode of treatment. 23. That whilst hypnotism is by no means entitled to the credit of being a panacea, or universal remedy, it is capable of being rendered eminently useful in many diseases of the most painful character, and which prove most rebellious to *ordinary* treatment. 24. That it may be made available in exciting the absorption of morbid deposit. 25. That it may also be directed so as to invigorate the strength and increase the bulk of morbidly weak and atrophied parts. 26. That it may also be rendered a valuable adjunct to other medical means, but, as well as the latter, ought to be applied, in the treatment of disease, by professional men only."—*Medical Times, Feb.* 22.

MEDICAL PATHOLOGY AND PRACTICAL MEDICINE.

3. *Iodine in the Treatment of Tumors.*—We record in the present number of our Journal a very important case (from Dr. Stryker) of the removal of a tumor, supposed to be of an osteo-sarcomatous kind, by the external and internal use of Iodine. We record below a case of recent tumor, of a different character, successfully treated in the same manner, by Dr. Close, of Manchester, England, with remarks on the same :—

" Mrs. S——, of Mount street, Manchester, in the beginning of December, 1844, brought her little girl to me, and stated that the child had shown for a fortnight a gradually increasing inability to stoop, or to move the lower extremities, but that in every other respect she seemed to be well, and had always enjoyed good health. On examining the abdomen, I detected an indurated condition of the abdominal muscles, extending from the pubic and right and left iliac regions, nearly to the umbilicus. The mother said she was quite ignorant of the existence of the tumor, as the child had never complained of pain or uneasiness in the part, nor could she tell what had given rise to it. On the following day, however, she mentioned to me that about a month previously the child had fallen from a height of five or six feet, and had alighted with the lower part of the abdomen upon the edge of a wicker basket, vulgarly called a *skep ;* the father saw the accident, the basket was overturned ; she seemed unhurt, and the misfortune was soon forgotten.

" No pain was complained of on pressure, but there was considerable dysuria, which induced me to suppose that the bladder suffered either from pressure or sympathy. I ordered a blister to be applied to the affected part, to be kept open and dressed with the ung. hydr. nit., and suitable doses of the hydr. c. cret., to be given internally. The irritation of the bladder was removed ; but, at the end of a week, no decided impression appeared to have been made on the size of the tumor. I then ordered the iodine in the form of ointment, to be applied night and morning, and to be given three times a day, combined with potass. iodid. The improvement became rapid, the tumor diminished from the circumference to the centre, in a short time she began to walk, and now she is as active as ever she was ; there is still some induration left, apparently in the substance of the rectus muscle, but this is gradually being removed by the use of the same agent.

" This is one case of many in which I have prescribed the iodine with perfect confidence as to a successful result. The deposit was of recent formation, no doubt the product of subacute inflammation in the form of coagulable lymph.

This, if disregarded, probably would have become consolidated, and, as Mr. Tatum conjectures, 'ossified deposit' might have followed, or, from peculiar diathesis, some malignant tendency might have been imparted.

"How varied is the experience of medical men as to the powers of iodine! Now, I think a guide to its pathological usefulness in the removal of tumors may be found in the circumstance, whether the tumor be organized or unorganized; that is, whether it be a secretion more or less consolidated, but lifeless, and not possessing blood vessels capable of adding to its own structure, or even of producing a deposit and growth of a dissimilar nature.

"In the commencement of practice, I was highly gratified with the way in which I succeeded in removing an enlargement of the submaxillary gland, the size of an orange, from each side of the neck of a girl ætat. 12, by iodine. The case was recorded in a contemporary journal.

"In the course of time cases of bronchocele came under my care; some were more or less expeditiously removed by the same means; others I found obstinate, and many incurable. I soon learnt that failure was not singular. Bayle* gives a summary of the cases published by Coster, Irmenger, Baup and Manson, from which it appears that of 364 cases of this disease treated by iodine, 94 were uncured. Dr. Bardsley† cured only nine, and relieved six, out of thirty-one cases. Now, what are the different morbid conditions of enlargement of the thyroid gland which may exist?

"We meet with this enlargement very frequently amongst females, at the age of puberty, when there is a concomitant change in the voice, not so decided as in the male, with increased circulation of the blood in the adjacent textures:—here it may depend on an accumulation of blood in the vessels, and an effusion of serum or lymph in its tissue; a similar state I have seen produced by severe straining during parturition. I have never seen the iodine fail in such cases, if administered at an early period. If the case has been neglected and the patient be more than from 21 to 24 years old, more difficulty is experienced.

"We have enlargement from infiltration of coagulable lymph in the substance of the gland, an analogous condition to that which I have narrated as occurring in muscular tissue,—this may be gelatinous, fibrous, cartilaginous, or osseous; each term being expressive of the different and successive stages of development produced by the period of time during which it has existed. Now, iodine is capable of removing the gelatinous, or fibrous, or cartilaginous deposit, so long as it remains in the state of cartilaginification, but as soon as the cartilage is traversed by vessels carrying red blood, it becomes incapable of exerting any influence upon it.

"We meet with an encysted enlargement of the thyroid gland, in which cells are developed in its structure, these containing substances of a fluid or solid nature. These, by physiologists, are considered to be organized and capable of reproducing themselves, and are completely uninfluenced by iodine.

"Hypertrophy of the gland is sometimes said to exist; if by this term is meant simply an enlargement of its own healthy structure, I have never met with such a case.

"Lastly; a scirrhous condition of the gland is sometimes met with. Now, Müller has detected blood vessels in all morbid growths, cholesteatoma excepted, which is often developed within cysts, with which it maintains no organic connection. He scouts the idea of schirrus being unorganized, and he also repudiates the notion of the arrangement of the vessels in any tumor, except in aneurism by anastomosis, presenting anything remarkable. Iodine, I need not say, has no remedial influence on schirrus.

"From these considerations, it becomes a matter of importance to ascertain as precisely as we can, the nature of the enlargement, and its age, previous to forming a prognosis. Unfortunately there is much difficulty in diagnosing such tumors; the sense of touch is most to be relied upon, and ought to be educated; this, assisted by the exploring needle, will generally enable us to form a tolerably correct opinion.

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* *Bibliothèque de Thérapeutique*, tom. 1er, p. 394.

† *Hospital Facts and Observations*, p. 121.

In the discussion on Mr. Tatum's cases, Mr. Acton has not mentioned that particular pathological effect of the potass. iodid., to which M. Ricord alluded, and which I found exceedingly puzzling in the first case in which I administered it. The case was one of secondary venereal symptoms: these disappeared under its influence, but they were succeeded by a peculiar eruption very much resembling acne. So much at a loss was I, that I wrote to a medical friend, who has been long in extensive practice, and he recommended me to give the hydrar. bichlorid. I conjectured, however, that the tertiary eruption was owing to the potass. iodid., with which I dispensed altogether, and gave mixture of magn. carb. and aq. menth. pip.;—the acne disappeared, and the patient was permanently cured. Mons. Ricord says:—"The skin is most susceptible of the action of the potass. iodid.: Eczema, herpes, erythema, impetigo, rupia, an affection simulating acne, &c., are common from its influence. These effects disappear by the discontinuance of the remedy." '—*Medical Times*, *Feb.* 22.

4. *On the rapidity of the passage of some foreign substances through the kidneys.*—The last number of the "Medical Gazette" contains a continuation of Mr. Erichsen's experiments upon the patient affected with extroversion of the bladder, with the view of determining the rapidity of the passage of several foreign substances through the kidneys.

Vegetable infusions require, according to him, a longer average time for their passage through the system than the ferrocyanate of potash, and, like the latter, the rapidity of their transmission from the stomach to the blood, and their secretion from this by the kidneys, depends in a great measure on the condition of the digestive process at the time they are taken. Thus, an infusion of galls appeared in the urine in 30, 33, and 36 minutes; an infusion of rhubarb in 22 minutes, infusion of madder in 16 minutes, infusion of uva ursi in 35 minutes, and decoction of logwood in 19 minutes.

The next series of experiments were instituted with the view of determining the length of time which intervened between the administration of the salts of the fixed alkalies, and the change in the reaction of the urine from acid to alkaline. The citrates and tartrates of potash and soda alone were used, because the subject of the experiments could not be induced to take either the carbonates of the alkalies or the liquor potassæ in sufficient quantity.

The rapidity with which the urine was rendered alkaline in these experiments varied—in one instance 28 minutes were required, in another 48 minutes, and in two others 34 and 40 minutes. In two instances the urine continued alkaline until the fourth day. The increase in the amount of the urinary secretion after the salts of soda had been taken was remarkable, and well exhibits the diuretic properties of the alkali. After the citrate of potash had been taken, the quantity of urine did not appear to be much augmented, though it was rendered distinctly alkaline.—*Dublin Medical Press*, *July* 16*th*, 1845.

5. *On the Dropsy which follows Scarlatina.*—Dr. Golding Bird gives the following summary of the facts recognized in connection with the development of dropsy after scarlatina:—

1. The anasarca does not appear during the existence of the rash.

2. The sequelæ, which do not depend on local mischief about the throat, usually appear about the end of the first week after the recession of the rash, rarely before, and not often after this period.

3. The frequency of their occurrence is in the inverse ratio of the vividity of the rash.

4. The urine contains certain of the elements of the blood (albumen and red particles), with a considerable number of large organic globules.

5. The blood contains some of the elements of urine, as proved by the existence of urea in it as well as in the secretions derived from it.

6. Analogous effects, although looked for, have not been observed on the recession of other exanthemata, as measles, and small-pox; nor in cutaneous affections, in which free perspiration must be checked or greatly lessened, as in lepra, psoriasis, chronic eczema, &c.—*Ib.*

6. *Treatment of Bed-sores.*—Dr. Graves, in his Clinical Medicine, recommends a nutritious diet, wine, and the sulphate of quinine. The sores to be washed night and morning with a solution of chloride of soda, in the proportion of twenty or thirty drops to an ounce of water. A liniment compound of two ounces of castor-oil and one of the balsam of Peru is to be applied on pledgets of linen, and covered with a poultice of linseed meal two or three times a day.

A writer in the *Medico-Chirurgical Review* recommends as a prophylactic a solution of creosote, one part in eighty of water; if the skin should break, the zinc or lead ointment to which camphor has been added; and in still more obstinate cases, an ointment composed of four parts of fresh prepared tannate of lead and thirty of lard. A writer in Walther and Ammon's Journal recommends a lotion composed of equal parts of spirits of camphor and goulard water.

7. *Tumors successfully tereated by Hydriodate of Potash.*—Dr. Tatum relates three cases of tumors in the substance of muscle, supposed to be the effect of chronic inflammation, and deposition of coagulable lymph between the fibres. In each of the patients, the swellings were situated in the sterno-cleido-mastoideus muscle; and in one a similar tumor afterwards formed in the clavicular portion of the pectoralis major muscle, but which was distinguished by being of a bony hardness, and apparently connected with the periosteum of the clavicle. The author is of opinion, that had the progress of the disease not been interrupted early, ossific deposit would probably have taken place in the tumors, and the muscular structure would have been converted into bony tissue. He draws particular attention to the decided influence which the iodide of potassium had in removing the tumors, and the inefficacy of various other remedies which had been previously tried.

Mr. Cæsar Hawkins alluded to several cases, which in many respects resembled those described by Mr. Tatum, only that the inflammatory action was not confined to the muscular tissue.

Sir George Lefevre, with reference to the action of the iodide of potassium, mentioned a case which he had seen when recently in Paris. It was that of a young gentleman, who was laboring under secondary symptoms, following a chancre on the finger, caught while attending a midwifery case. For the relief of this complaint, he took large quantities of the iodide of potassium, and in a few months he became quite well, but as a singular consequence of taking that remedy, he lost all venereal power. He was in the habit of taking ten grains three times a day, and he continued to do so for about three or four months. Sir George Lefevre was desirous of learning whether any member of the society had noticed such a consequence of the exhibition of the iodide of potassium. The disappearance of the breasts, and the diminution in size of the testicles, had been mentioned by several writers, as produced by long continued, or large doses, of iodide, but he himself had never known a case where the venereal power had been destroyed by that medicine.

Mr. Cæsar Hawkins observed, that, in common with many other surgeons, he had exhibited the iodide of potassium somewhat freely, but had never heard of any such result from its use, and he thought if it had occurred, that the surgeon who prescribed the medicine would be sure to hear of it.

Mr. Curling had never met with any case of tumor in the sterno-cleido-mastoideus, but had often seen instances of induration of muscle. He had seen it in the case of an infant, two months after birth; the muscle was as hard as cartilage, and the head was fixed to one side. In this instance one side only was affected; but it sometimes happens that both are involved in the disease. The induration is generally removed in four or five weeks, without any other application than a mild liniment.

Mr. Acton had seen Ricord use the iodide of potassium very largely, and had also done so himself, but had never noticed any such effect, as that described by Sir George Lefevre, and which he should be inclined to attribute to mental causes. The principal pathological effects produced by the exhibition of the iodide of potassium, were, pain in the stomach, which might be prevented by giving the medicine in a large quantity of fluid, and a metallic taste in the mouth, with a spongy condition of the gums. He doubted the fact that absorption of the mammæ or testes was produced by the iodide. At all events it is of rare occurrence.

Mr. Snow mentioned a case of inflammatory swelling of the sterno-cleido-mastoideus, following an injury, and which was relieved by the use of lotions, &c.—*London Times, Feb.* 1, 1845.

8. *On the Periodicity of Neurosis.*—This case, related as a singular instance of neuralgic periodicity, was that of a girl aged 14, in whom the catamenia had not appeared. Six years ago, she was thrown out of a swing, and struck her head against a brick—pain in the forehead ensued, which lasted about a fortnight. The right hand then became clenched, and the head-ache ceased. The hand continued immovably closed for three weeks, when it opened of its own accord, and the head-ache returned. The hand remained open, and she had the free use of it for three weeks, during which time she suffered from head-ache; it then closed with the same relief as before. From the time of the accident, to August last, a period of six years, the alternations of closing and opening of the hand, and of the head-ache, followed each other with periodicity. When the author first saw the patient, the hand was closed, and a forcible attempt to open it gave her great pain in the head. She complained of tenderness along the cervical vertebræ. One-fifteenth of a grain of strychnia was given three times a day; and mustard poultices were applied to the spine; as the perspiration was very sour, an antacid diet was directed. Under this plan her health improved, and when the hand opened at the end of the last three weeks of its closure, she ceased to complain of the head. After this there was no return of the closure of the hand, nor of head-ache, and she has continued perfectly well up to this time.

Sir George Lefevre congratulated the Society on having at last a paper on a medical subject, after so much attention had been devoted to surgical matters. He made some remarks generally with respect to the periodicity of nervous affections, and mentioned the case of a young woman in whom periodic palpitation of the heart occurred regularly every twenty-eight days.

Mr. Cæsar Hawkins inquired what effect was anticipated from the homœopathic dose of strychnine, which had been exhibited? From the paper, it appeared that the spasmodic clenching of the hand began to diminish after that medicine had been exhibited.

Dr. Pidduck was not inclined to refer the relief of the spasms to the small doses of strychnine which had been given.—*Ibid.*

MATERIA MEDICA, PHARMACY AND CHEMISTRY.

9. *To detect the presence of Sugar in Diabetic Urine*, by Dr. Cappezuoli (Gaz. Toscan. and Chem. Gaz., Aug., 1844, p. 369).—The fresh urine is placed in a cylindrical vessel, and to it added a few grains of the hydrated oxide of copper, and enough of a solution of caustic potash to render the urine alkaline; the whole is shaken together, when it becomes troubled from the precipitation of the phosphates, and from the oxide of copper which it contains in suspension. The urine generally becomes clear from the subsidence of the voluminous deposit, which is at first of a sky-blue color, but at the end of a few hours a canary-yellow circle is seen to form on its surface, and gradually to pervade the mass; subsequently a red color more or less deep in the form of a zone replaces the yellow either wholly or in part. This phenomenon, which is generally completed in twenty four hours, is owing to the reaction of the sugar on the oxide of copper, which is gradually deprived of its oxygen. If the reaction does not appear in twenty four hours a little potash will develope it.—*Silliman's Journal, for July.*

10. *New Method of Analyzing the Blood*, by L. Figuier (Ann. de Chim. et de Phys., Aug., 1844, p. 506).—This method is based upon the fact pointed out some years ago, that when blood deprived of its fibrine was mixed with a solution

of a neutral salt and thrown upon a filter, scarcely any of the globules passed through. The author has been enabled to retain all the globules by using a solution of sulphate of soda, marking 16° to 18° Baumé; adding two volumes of this solution to one volume of blood.

The blood furnished by bleeding is beaten with a small bundle of whalebone switches at the moment that it issues from the vein; the fibrine separates and adheres to the switches. The blood is now passed through fine linen to collect that portion of the fibrine that does not adhere to the whalebone; both portions are added together well washed with water, dried at the temperature of boiling water, and weighed. (Previous to weighing, if it be desired to detach the small quantity of fatty matter adhering, digest in ether.) By ascertaining the entire amount of blood taken from the patient, we are thus enabled to tell the relative portion of fibrine.

The next step is to take about three ounces of defibrinated blood, dilute it with twice its volume of sulphate of soda, marking 16° to 18° Baumé; throw this upon a filter that has been previously weighed and moistened with a solution of sulphate of soda. The serum filters readily, and is of a yellowish color. The filter cannot be washed with cold water, as this dissolves the globules; but hot water of 195° Fah. coagulates them, and enables one to accomplish this in the following manner: take the filter from the funnel and immerse it in a cup of boiling water; repeat this two or three times, and all the sulphate of soda will be washed away; dry the filter and its contents at about 212°, and weigh.

To separate the albumen from the serum deprived of its globules, heat it to ebullition in a capsule. The albumen coagulates; it is thrown on a small piece of fine linen, washed, dried at 212° Fah. and weighed. To ascertain the quantity of water in the blood, an ounce of it is taken and evaporated to dryness in a water bath; the weight of what remains indicates the relative proportion of water and solid elements. The soluble salts of the serum are represented by the difference of the weight of the blood employed and the amount of albumen, of water, and of globules, directly determined. The following is the result of an analysis of blood from a diseased patient:

The blood upon beating furnished for 8 ounces (the quantity taken from the patient) 10·4 grains of fibrine. 3 ounces of the blood separated from the fibrine, and filtered with sulphate of soda, gave 180 grains of globules. The serum filtered from the last by heating, furnished 80 grains of coagulated albumen. 1 ounce of the original blood evaporated to dryness, gave a residue of 85 grains. From these the blood is seen to contain—

Water,	802·9
Globules,	130·6
Fibrine,	3·9
Albumen,	50·6
Inorganic salts,	12·0
	1000·0

The author recommends the employment of saline solutions for the purpose of separating the globular matter from organic fluids, as milk, mucus, chyle, lymph. M. Figuier has also made a chemical examination of the globules, and he thinks it probable that they contain a small quantity of fibrine, albumen, and the coloring matter of the blood.—*Silliman's Journal, for July.*

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11. *Cause of Diabetes*, by L. Mialhe (Ann. de Chim. et de Phys., Sept., 1844).—It is known that in a healthy state animals may feed on sugar, gum, &c., without any appearance whatsoever of these substances in the urine or other secretions; but in the disease called diabetes, this kind of food appears to undergo little or no change, and the urine is found to contain more or less sugar, or a substance resembling gum. The result of the present experiments has been to show that hydrocarbonaceous food, such as grape sugar, gum, starch, &c., does not undergo assimilation until the alkalies of the blood have transformed them into a peculiar substance, the nature of which has not yet been examined; if however this transformation does not take place, they undergo no change, and are ex-

creted by the kidneys. The reason why saccharine and farinaceous matter does not undergo the requisite change in the diabetic patient is explained as follows: individuals suffering under diabetes do not perspire, or but very slightly; as the secretions of the skin are acid, it follows that when they are suppressed, the presence in the blood of free alkalies or their carbonates becomes impossible, being neutralized by the acids not excreted; consequently the saccharine matter used as food cannot undergo the *change necessary* prior to its assimilation, and the kidneys endeavor to disembarrass the blood of what is now foreign and noxious. This fact suggests, as the curative means for diabetes, diaphoretics and alkaline preparations.—*Silliman's Journal, for July.*

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12. *Test for Bile*, by M. PATTTENKOFFER (Lancet, Oct., 1844).—Add to the fluid supposed to contain bile concentrated sulphuric acid until it becomes hot, and then drop into it a solution of sugar; the presence of the bile is manifested by the mixture becoming of a deep pink or red color, varying in intensity.—*Ib.*

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13. *Bromine and Iodine.*—Prof. W. W. MATHER, at Athens, O, writes under date of Jan. 20, 1845—"I have found bromine and iodine in the bittern of the salt springs of this vicinity. They are not very abundant, but by improved methods of extraction, I can supply any demand for bromine or its common combinations; I can supply it as cheap as any one. I have extracted bromine pure, and formed various compounds with it, as bromide of iodine, hydrobromic acid, hydrobromates of potassa and soda, bromates of potassa, soda and of lime."

We with pleasure record this fact, and can add that we have received similar statements from Pittsburg, in Pennsylvania, and other places in the west.—*Ib.*

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14. *On the Agency of Galvanism in introducing Remedies into the System.*—The writer of this paper, reflecting on Davy's discovery, "that volatile substances, when connected with a galvanic battery, are invariably carried in the course of the electric current," resolved to try whether this principle might not be rendered subservient to the cure of disease. Iodine was the first remedy he determined to make trial with. After various experiments, he at length completely succeeded in introducing this substance into the system by the agency of galvanism, and effected cures in five instances in which he employed this compound therapeutic agent. As the result of his experiments, he concludes by stating, that this novel mode of employing medicines possesses advantages over the ordinary method which ought to entitle it to a trial. As not the least of these advantages, he mentions, 1st, that the topical effects of iodine or any other drug can be most readily perceived when used in this way. 2d, That any injurious overcharge of the remedy used, will pass off by the negative pole; and 3d, That the constitution suffers less from remedies administered in this than the ordinary manner.—*London Medical Times, April* 12, 1845.

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15. *On the Astringent Properties of the Sporules of Fern.*—In tropical countries, the sporules which cover the young fronds of the larger ferns have been long prized as styptics. Some of these sporules, imported to England from the West Indies, have been used by English practitioners, and found to possess highly styptic properties. Hasskarl has lately brought to Holland a specimen of the sporules of the Javanese *Alsophila lurida*, called by the natives *Bakuskitang*, which have been very advantageously employed by Dr. Molkenböer, of Leyden, in the treatment of internal and external hemorrhages.—*Ibid.*

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16. *Poisonous Effects of the Expressed Juice of Elder-Bark.*—A strange opinion prevails among the lower orders with regard to the properties of elder-bark. They imagine, that this substance, if scraped from above downwards, possesses a purgative power, and that if, on the contrary, scraped from below upwards, it produces emetic effects. Having premised this statement, the writer of the present paper states, that Dr. —— was called to visit a married woman, 54 years old, of a bilious temperament. When he first saw her, she was constantly vomiting coagulated greenish matter, which she supposed was bile, and com-

plained of violent colic. On inquiry, Dr. —— found that she had been ill ten days before he was sent for, and that her husband had administered to her, as a purgative, about two tablespoonfuls of the expressed juice of elder bark, scraped from above downwards. To relieve the colic Dr. —— ordered some compound infusion of senna, which was not taken, as the patient had several stools after his departure. Next day enteritis set in, and was followed by paralysis, under both of which the patient soon sunk.—*Medical Times, April* 12.

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17. *Matico in Uterine Hemorrhage.*—Mr. Butler, in two cases of abortion, has used the matico in infusion, internally and by injection, with the best results. In one of these cases, the patient was a woman fifty years of age, the mother of a large family, and who aborted at an early period, in consequence of violence. Troublesome hemorrhage remained for some time, resisting all the usual means of treatment. The matico speedily effected a cure. In another case of early abortion, the same plan was also successful, after other means had failed.—*Lancet.*

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18. *On the endermic use of Strychnia in Functional Amaurosis.*—Pure strychnia, when used by the endermic method, exerts an effect equal to that of the nitrate, or hydrochlorate. If rubbed into the vicinity of the eye in quantity so small as that of a quarter of a grain, it produces a sensation of violent burning, with increased lachrymal secretion, accelerated pulse, head-ache, vertigo, and obstructed respiration. Two or three hours after it has been applied, convulsive movements set in, accompanied with shooting pains in the head, extending to the affected eye: these disappear as soon as diaphoresis is induced. Two grains and a half produce the above symptoms, besides great restlessness. The author prefers the endermic, to the internal use of strychnia: 1. Because the remedy can be applied to the affected spot itself. 2. Because smaller doses are required. 3. Because a useful change of remedies can be more easily effected. For the purpose of excoriation, a blister is used by the author in preference to other means. He applies it to the supra-orbital, or temporal region, and when the part is excoriated, the strychnia, mixed with saliva, is then rubbed in, and the wounded spot covered with waxed paper. It is necessary to begin with the smallest dose of strychnia, and to increase it gradually and carefully. The writer of this paper strongly dissuades medical men from directing the application of strychnia behind the ears, as he has witnessed violent tenanic convulsions from such an application.—*Dr. Wimmer, of Munich, in Neu Medic. Chirurg. Zeitung.*

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19. *The treatment of Syphilitic Affections.*—At a recent meeting of the Surgical Society of Ireland, the proceedings of which are reported in the "Dublin Medical Press," an interesting paper was read by Dr. M'Egan, on the diagnosis and treatment of syphilitic diseases. In the discussion to which this paper gave rise, the president, Mr. Carmichael, took occasion to give a brief account of the origin and progress of his own investigations on the subject, and after alluding to the opposition which his views had at first encountered, and exposing the attempts which had been made to suppress them, by some practices of very questionable character, concluded by making the following observations in reference to the employment of mercury.

1st. I do not think it necessary in the treatment of the simple primary ulcer without induration, nor for the papular eruption, and other constitutional symptoms it produces; but should the eruption linger into the fourth or fifth week after it has desquamated into scaly spots or blotches, mercury in alterative doses, either in the form of Plummer's pill or the proto-ioduret of mercury, will be of service in clearing the skin of the eruption, and in removing the pains of the joints, which are constantly present in this form of venereal. But I protest most strongly against the use of mercury at the period when the eruption first appears in its papular form, at a time that it is usually preceded and accompanied by considerable fever, like all the other exanthemata, to which class of Cullen it obviously belongs. If we should exhibit mercury prematurely during the eruptive stage of this as well as the other forms of disease, the scaly excepted, we may possibly clear the skin of the eruption, but in all probability it will return again and again, to the great disappointment of the patient and perplexity of the medical attendant.

2nd. For iritis I would give mercury, so as to excite its full effect upon the system, and at the same time not neglect the usual antiphlogistic measures to remove this dangerous inflammation.

3rd. For nodes I would exhibit mercury, and I think the iodide of that mineral for their removal is superior to any other preparation.

4th. For the phagedenic primary ulcers I have always found mercury most injurious. They are most successfully treated by the application of strong nitric acid, immediately followed by a douche of cold water. The same application is also the most efficient for phagedenic ulceration of the throat, which if not checked will soon extend over the velum, uvula, and back of the pharynx, from whence it will spread upwards into the nares, and downwards into the larynx; in either of which situations I need not state the difficulty and danger of the case. Instead of the douche of cold water, in this situation inadmissible, I employ a probang; the sponge moistened in a solution of soda or potash will neutralize any superabundant acid applied to the ulcers. During the eruption of pustules or tubercles which cause those crusts termed rupia, I have found mercury injurious, although its exhibition may at first flatter both patient and surgeon that the disease is yielding to this remedy. But the natural tendency of this eruption is also to become scaly after it has existed several weeks or months. This scaliness is a sign that the disease is on the decline, and indicates that mercury in alterative doses may then be employed with safety and advantage. Should any of the constitutional ulcers on the skin spread after the rupia crusts fall off, their progress may also be effectually checked by the application of nitric acid to their phagedenic margins. They of themselves first show signs of reparation in their centres, which need not therefore be meddled with. Mercury in this stage of the disease should not be exhibited. Hydriodate of potash, sarsaparilla, country air, and the tranquillizing effects of opium, should the patient be harassed by extensive ulceration, are the constitutional means most to be relied on.

5th. For the true Hunterian chancre with hardened head and base, and for the scaly eruption which attends it, as well as the deep excavated ulcer of the tonsil, nodes, and other symptoms belonging to this form of disease, mercury may be esteemed a safe and expeditious remedy.

These are the views I entertained more than thirty years ago, as appear from my various publications on the subject; and it surprises even myself not a little that after so long experience, I have felt no occasion or necessity to depart from them. But I have often been pained at finding that many of the profession, particularly in the army, range themselves under the denomination of mercurialists or anti-mercurialists—*i. e.*, they either exhibit mercury in all venereal cases or refrain from it in every instance, regardless of the characters of the symptoms and stages of the disease. It may, however, be satisfactory to those who are indolently disposed, and wish to follow routine, to know that mercury may be given in general with advantage when an eruption is *scaly*—no matter whether or not it has been scaly from the commencement.

In fine, from my publications, as well as from what I have stated this night, it is obvious, that although in the great majority of cases I consider the exhibition of mercury unnecessary or injurious, yet in one form of disease, that which produces the scaly eruption, lepra or psoriasis, it is the remedy upon which I place my sole reliance; and in other forms of venereal which produce the papular, pustular, tubercular, or rupia eruptions, there are stages and states in which it will be found a most valuable auxiliary. Therefore, though it may accord with the natural indolence of our dispositions to treat all cases either one way or the other, yet no practitioner, I aver, will be successful in following this routine mode of practice, who does not exert his powers of discrimination to ascertain to which class the symptoms under treatment belong; for no matter, in a practical point of view, whether there is one or a plurality of venereal poisons (as I advocate), it is of the utmost consequence, to ensure an efficient and successful issue, to consider the form of the disease under consideration, and to which of my classes it appertains.—*Prov. Med. and Surg. Journ.*

PATHOLOGICAL, THERAPEUTICAL AND OPERATIVE SURGERY.

20. *Opening in the anterior part of the urethra, cured by an operation*.—The subject of the operation, in the present instance, was a wine-porter, who had permanent stricture, for which he was operated on by Dr. Clark in July last; but being of intemperate habits, and not very good constitution, he had acute inflammation of the testicles, followed by sloughing of the scrotum and penis, which, after the healing process was completed, left an aperture in the urethra one inch and a quarter in length, and occupying a small portion of the scrotal division of the passage, and extending forwards for a considerable distance anterior to it. The following were the steps of the operation for the closure of this opening. A small inverted portion of skin was first dissected out from the scrotal extremity of this fistula; four incisions were then made, two of which extended downwards and outwards over the scrotum, and the other two upwards and outwards on the sides of the penis; a lateral flap was thus marked out on each side, which was then dissected up; and the two being brought together, *surface to surface*, over the fistulous opening, were maintained in that position by lateral splints of leather, and sutures passed through the latter and the skin. A semilunar incision was then made on each side, to relieve the anticipated tension when swelling came on. A full-sized gum-elastic catheter, which had been passed prior to the commencement of the operation, was left in the bladder.

Adhesion took place throughout the whole extent of the flaps, except at two points, one being at the scrotal extremity of the fistula, the other between the lateral supports: these were freely touched with caustic, and soon closed. A small portion of the margin of one flap sloughed. The operation was performed in November; and at the present date (June 10th) the patient continues to pass his water freely, and in a full stream. There is no contraction of the penis, or any part of the passage, and the cicatrix is scarcely visible. The perineal opening still allows of the occasional escape of a drop of urine.—*Dublin Medical Press, July* 2.

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21. *Case of Strangulated Congenital Hernia in a Child six weeks old, requiring Operation.*—Mr. Long, Surgeon to the South Dispensary, Liverpool, relates a case under this title in the last number of the *Provincial Journal*.

On the 10th of May, Mr. Long was requested to see the infant, which had cried all night, had passed neither motion nor flatus, strained frequently, and had vomited a yellowish looking matter. He found a scrotal hernia on the right side, the size of a hen's egg; a portion of this was reduced, but a smaller portion, the thickness of the little finger, which occupied the inguinal canal, and had the testicle at the bottom, could not be returned, notwithstanding the employment of the warm bath, cold applications, enemata, the long tube, &c.

The operation was performed on the following day; the sac contained a knuckle of intestine of a light port-wine color in contact with and adherent to the testicle by a band of lymph: this was torn through, and on the dividing of the stricture, several folds of intestine were forced down by the crying of the infant, which contrasted strongly with the strangulated portion. The most difficult part of the operation Mr. Long states to have been, the reduction of the intestine, the forcing efforts and crying of the child being insurmountable, until the difficulty was overcome by the occurrence of fainting. During the night two motions were passed, the first exceedingly fœtid, and in the course of the following day two more; everything went on satisfactorily, and on the 17th the child was quite well, the wound being healed. Subsequently there was no appearance of the return of a hernia at the part.—*Ibid.*

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22. *A case of Aneurism of the Popliteal Artery, cured by compression of the Femoral Artery.*—The patient, a private in the Coldstream Guards, twenty-seven years of age, and previously healthy, on the 22d of May, 1844, complained of pain and swelling behind the right knee. On examination, a large, irregularly-shaped aneurism was found filling up the popliteal space, strongly pulsating, and admitting of being partially emptied by pressure. A delay took place in

proceeding to apply compression, till the 18th of June, owing to the patient having been seized with acute laryngitis; an Italian tourniquet, with modifications in its construction, was then applied: but a relaxation in the treatment was soon required, from the patient being attacked with modified small pox. On the 8th of July, the tumor having increased in size, the plan was adopted of screwing the pad down firmly upon the femoral artery, and leaving the patient the key, so that when the pain became intolerable, he might relax the pressure by the instrument, and compress the artery higher up, by his finger. On the following day, this method was found to have been successful, for the tumor was perfectly solid, and no pulsation or hollow sound was afterward perceived. The compression was continued for nine days longer. When the instrument was removed, the femoral artery was distinctly felt to pulsate down to its entrance into the tendinous canal, and two arteries of the size of crowquills, could be traced over the surface of the now hard and solid tumor. From that date, the swelling gradually diminished; the patient began to walk about on the 9th of August, and he was dismissed from the hospital, to undertake light duty on the 14th of November. He returned to full duty on the 12th of December, which he has efficiently performed to the present time.—*The Medical Times, February* 1, 1845.

OBSTETRICS AND DISEASES OF FEMALES AND CHILDREN.

23. *Birth of Four Children.*—A healthy, strong woman, ætat. 35, after having had five children, became pregnant again, and this time her abdomen appeared to be of larger dimensions than usual. During the subsequent process of parturition, the waters were discharged sparingly; one child presented itself with the feet, and was expelled by the efforts of nature. Half an hour after, the birth of the second child began, and was terminated in an hour. The third and fourth children (apparently still-born) speedily followed. The quantity of water discharged was about 2lb. After one hour and three quarters, four separate placentæ were expelled. These four children (boys) were all born feet foremost; they were all perfectly mature and well formed; they resembled each other, and performed their functions regularly. Their length averaged from 15½ to 17 inches, their weight from 3lb. to 4lb. They all died within the next five days, notwithstanding the greatest care was taken of them as regards their nourishment and preservation. The mother left her bed five days after delivery, and remains in very good health.—*Medical Examiner, July,* 1845.

24. *Syphilis Congenita.*—F., ætat. 40, had a chancre 12 years ago, and was treated by a quack with pills, which probably consisted of sublimate. He rapidly increased the dose from 2 to 80; the larger doses invariably caused violent pain of the stomach, lasting for hours. A cure was effected in four weeks. During the treatment, the patient drank freely of brandy. Three years after this he married. His wife bore a healthy child, still living. The next five children were born apparently healthy, but were all seized five or six weeks after birth, with an eruption of the skin, during which they emaciated and died in a few weeks. When the next child was similarly attacked, the author was called in, and he found gradually enlarged pustules on the scrotum, anus, and internal side of the thighs. Eight days after, the penis and legs were covered with superficial ulcers; the skin between the ulcers was of a copper and red color; the child was greatly emaciated, and cried almost constantly in a hoarse, crowing tone. The author exhibited ¼ of a grain of hydrarg. oxyd. nigr. with carbonate of magnesia three times a day, and cured the child in a fortnight. The child was constantly suckled by the mother during the treatment, but the nipples were washed after each suckling. The child, as well as the parents, now enjoy perfect health.—*Medical Times, May* 3, 1845.

25. *Memoranda of Natural Labor.*—Mr. Close, of Manchester, promises, in a recently received communication, to draw up for the convenience of the student of midwifery, a synopsis or chart of most of those points which are of bed-side

importance, and which ought to be indelibly fixed on his recollection. The following are the memoranda which he supplies with reference to the theory and practice of natural labor. The student should closely study and remember: 1.—The construction of the pelvis—the promontory of the sacrum—the sacro-iliac synchondrosis—symphysis pubis foramen ovale—acetabulum—linea ileo pectinea—the false and true pelves. 2.—The relative position of the uterus, bladder, rectum, blood vessels, and nerves to each other and to the pelvis—the situation of the meatus urinarius—mode of introducing the catheter—perineum. 3. The measurements and diameters of the brim of the pelvis, especially the antero, posterior, transverse and oblique—the measurements and diameters of the outlet. 4. The form and structure of the child's head—the anterior and posterior fontanelles—the sagittal suture. Its measurement and diameters, especially the longitudinal, occipito-mental or oblique, and the transverse. 5. The mechanism of labor—the necessity of there being an exact adaptation of the various diameters of the head to those of the pelvis. 6. The situation of the head in the first stage of labor—the mode of its transmission, particularly that given by Naegelè—the situation of the head at the outlet. 7. The obliquity of the pelvis in relation to the spinal column—the axis of the brim—the axis of the outlet—the necessity of the propelling power being in the direction of the axis—the necessity of placing the patient in labor so that the axis of the uterine cavity may correspond with that of the brim—the impossibility of safely using any extracting force but in the direction of the axis. 8. The position of the uterus just previously to the commencement of labor—the nature and manner of uterine action—the state of the os uteri in the first stage—its situation—the means made use of by nature for its dilatation—the necessity of not unnecessarily interfering with this process. 9. The character of the pains in the first stage—the change which takes place in their character, in the position of the head, and state of the os uteri during the second stage. 10. The best mode of applying support to the perineum during the expulsion of the child. 11. The need of knowing that there is not another fœtus in utero before any attempt be made to extract the placenta. 12. The best kind of bandage, and the best mode of applying it. 13. The time and manner of extracting the placenta, and the necessity of ascertaining the condition of the uterus before attempting it. 14. The time and mode of tying, securing, and dividing the umbilical cord. Lastly: —The necessity of being perfectly satisfied that the patient is safe before he leaves her.—*Medical Times, May* 3.

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26. *Fallopian Pregnancy.*—Mr. Elkington, at a meeting of the Birmingham Pathological Society, exhibited a specimen of Fallopian pregnancy of the right side. The uterus and ovaries were normal. In the uterine extremity of the right Fallopian tube was developed a tumor, about the size of a seven months' fœtal head, which pressed upon the colon, and the ileum, near to the ileo-cæcal valve, to which intestines it had formed adhesions. The tumor contained the bones of a three months' fœtus, which were folded around what appeared to be a fibrinous clot, about the size of a small orange.—*The Medical Times, Feb.* 8, 1845.

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27. *Delivery in an unconscious state during a sleep of three days.*—The author was called on the 25th of May, 1843, to the wife of a joiner, who had been pregnant for the fourth time, and who was now in the ninth month of her pregnancy. She had fallen into such a deep sleep, that she could not be awakened by shaking, dragging, nor by stimulants, such as spirit of hartshorn, ether, &c. On the third day of this unnatural sleep, she was unconsciously delivered of a living healthy boy. When the author visited her on the fourth day, she had awaked just a short time before, unaware of having been confined, and perfectly astonished at the occurrence.—*Medical Times, March* 8, 1845.

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28. *Urachus not closed after Birth.*—A child, of one year, had an opening in the navel, out of which urine streamed whenever the child cried. The opening had the form of the orificium urethræ, the naval was thickened, and protruding, and resembled the glans penis. As long as the child remained quiet, the urine

ran from the urethra, but whenever the abdomen was pressed or distended, the urine streamed from the opening at the navel. The child, otherwise, is perfectly well.—*Medical Times, March* 8.

29. *Statistics on the Cæsarean Operation.*—The editor of the *Journal de Chirurgie*, after some remarks on the operation performed successfully by M. Lebeu (v. *Medical Times*, vol. xi., p 277) gives an abstract of a memoir published at Copenhagen by Keyser, entitled *De Eventu Sectionis Cesareæ*. Michaelis is the first author who published the results of this operation; he excluded as apocryphal all the facts anterior to 1750, and brought his researches down to 1783. A Danish physician continued it to 1839. These are the two statistical tables that Keyser submitted to a severe examination; he struck out 62 cases from Michaelis' list, and added 69 which the German author had rejected, or did not know of. He likewise enriched Levy's table with facts unknown to him. The number of cases in Michaelis' table was 265, and in Levy's 73; total 338; on which there were 128 successful, and 210 unsuccessful operations. The mortality was: for children 0·32, for the parents 0·62. But, on account of the unsuccessful cases not having been published, it is positive that the mortality is greater; Keyser, therefore, chose the cases which had occurred under his own eyes; and on 67 cases he reckoned 52 fatal, or 0·79. Wilde stated that the mortality was about 0·90; and Levy coincides with this opinion. Considering the mortality in children according as the mother died or survived, Keyser found it to be 0·32 in the former, and 0·27 in the latter. According to the time which had elapsed from the commencement of the labor until the moment of the performance of the operation, Keyser had formed three categories: in the first it was done during the first twenty-four hours; in the second from 25 to 72 hours after; and in the third after 72 hours had elapsed. In the first the mortality was for the mothers 0·67, and for the children 0·28; in the second, mothers 0·55, children 0·32; and in the third, mothers 0·72, and children 0·60. In 112 cases in which the condition of the membranes was observed, there were 47 successful, and 65 unsuccessful; of the former, in 12 the membranes were entire, and the average time which had elapsed in the others ere the operation was performed was 18 hours; of the latter the membranes were entire in seven cases, and the average time in the remainder was 26 hours. Dividing these last into three categories, we find when the operation was performed immediately, or at farthest in six hours after the rupture of the membranes, that the mortality was for the parent 0·50; for the children 0·14; when from seven to 24 hours had elapsed, mothers 0.60, children 0·22; beyond 24 hours, 0·66, and 0·49. In thirty-two cases in which version, the application of the forceps, or perforation of the cranium, had been previously attempted, the mortality was 0·66; and in 28 of these 32 cases, the mortality of the children was 0·82; it was 0·60 when the diminution of the pelvis was owing to rachitism, and 0-69 when produced by mollities ossium. In 147 cases the incision was made on the linea alba; mortality 0·56: on the side in 56; mortality 0·68. In cases of hemorrhage, mortality 0·72; of hernia, 67. The mortality when the measurement of the pelvis was 1½ inch, and less, was 0.47; on the contrary, when it was 1¾, and above, it was 0.66. On 123 cases, the causes of death were as follows.

77 died from inflammation of the abdomen.
29 " " nervous accidents.
10 " " effusion of blood.
2 " " internal hemorrhage.
2 " " inflammation of the thoracic organs.
1 " " rupture of the uterus, and violent hemorrhage on the 7th day.

Relative to the epoch of death, it took place; once immediately; 9 times in less than six hours; 16 times in from six to twenty-four hours; 108 times from the 1st to the 7th day; 16 times from the 8th to the 21st day: once on the 30th day by osteo-malacia; and once on the 36th day by intestinal perforation.—*Medical Times, Feb.* 22.

MISCELLANEA.

30. *Going Snacks with the Apothecary.*—In an action upon a policy of insurance, to recover the amount insured, the house having been burned, and the company refusing to pay, the following curious revelation was made :—

"Mr. Knight, a chemist and druggist, in the borough, said, that at one time he compounded about a dozen or twenty prescriptions of Dr. Firth in a day; Dr. Firth's profits upon the prescriptions which I made up for him were about £5 a week; he also had *similar dealings* with other druggists and chemists."

"Mr. Fuller, a chemist and druggist, said that in 1839, 1840, and 1841, he compounded about four thousand five hundred prescriptions of Dr. Firth's; the doctor's profits on the *business* were about £300; he occasionally got fees beside; *this kind of practice is not uncommon.*"

So we have often heard, but we never before had it sworn to. Every day, more and more light is thrown upon the system, which enables certain folks who are in the secret to have it all their own way. This kind of practice Mr. Fuller says is not uncommon. In other words, the gentlemen called "pures" are in the habit of selling medicine to their patients, by thus employing a chemist or apothecary to dispense it for them, under the rose. Some will, perhaps, say that the practice is confined to a second or third class of practitioners; but we are assured by those who are well qualified to give an opinion on the subject, that it is not; and that several who hold their heads very high resort to it. And not only is this the case, but bargains are said to be made between physicians and surgeons on the one hand, and the blue-bottle gentlemen on the other, to divide the fees received from any patient "bagged" by the latter for the former. In other words, the "call-me-in" is as beneficial to the caller as the called. Whether any shade or modification of this method of doing business is to be found in Dublin, we know not; some say there is; Be that, however, as it may, it is quite clear that there is some very good and substantial reason for the preference given by certain gentlemen to certain other gentlemen; for in no other way can we account for the burning zeal and desperate efforts made to exclude one man and substitute another; or for the systematic hostility displayed toward men "who do not know how to prescribe."—*Dublin Medical Press, July* 16, 1845.

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31. *Gratuitous Medical Attendance.*—We make the following extract from a very able article in a late number of the "*Young England*," which, although more applicable doubtless to the state of things in England, is yet not altogether inapplicable here.

The indifference, parsimony, and cruelty of society at large towards the profession of physic; the taunts, jokes, and buffoonery with which those who rust in health are accustomed to salute the doctor, or the mean chandler's-shop advertisements of huxtering boards of guardians, and water-gruel-gauging Poor-law Commissioners, have never reduced the profession in public estimation, or their own, so much as their reckless and suicidal competition with each other.

This competition, and its subsequent bitternesses, jealousies, quarrels, and cabals, is of two kinds; competition for practice, and competition for honors.

* * * * * * *

We have not the remotest hope of inducing any change of conduct in these professional volunteers—these thank-you-for-nothings of the healing art; men, who, if an Act of Parliament were passed prohibiting physicians from prescribing for less than half-a-crown, would find a way of doing business for fourpence; men who, while degrading the profession in the eyes of the public, and cruelly abridging the means of life of their brothers, have the effrontery to talk of "God-like charity," and sometimes soaring to the sublime of profaneness, liken themselves unto "Him who went about doing good, without money and without price."

* * * * * * *

How can responsibility be secured over men who pretend to work for nothing? What hold have you upon a gentleman who calls himself an *honorary* surgeon or *honorary* physician? How ridiculous and impotent is the position of the benevolent with regard to them! If they well and conscientiously discharge their "miserable attendance upon peevishness and pain," you do them injustice by not paying them; if they make fools of you, and practice-blocks of the poor, you cannot do yourselves or the poor justice, because you have not paid them; you have been charitable, but not just; you have given no equivalent, and secured no responsibility.

As usual, there are faults on both sides; the public will be generous rather than just; there are men who give away thousands in charity, who would not give away a penny to do an act of justice; the "Honoraries," as they call themselves, know that nothing disguises self-interest so thoroughly, as the appearance of being disinterested; and, talking of "God-like charity," wins the hearts of stupid, benevolent, old women of both sexes.

It may be inquired, why should not society accept the gratuitous services of medical men, if medical men rush forward with eager vivacity, and strain every nerve in active competition to have their gratuitous services accepted? We answer, that you have no right to do wrong without necessity, because the necessity of others prevents their doing right. For, we argue no inherent meanness in the bulk of a profession which demands for its exercise, extent and variety of knowledge second to none, while for intrinsic usefulness it may rank with the noblest; but necessity is the parent of many meannesses:

> "Nil habet paupertas in se durior ipso
> Quam quod facit homines ridiculos."

Society supports the clergy in their emoluments and dignities, and will not suffer the indecency of competition to minister for nothing in spiritual things; though the necessities of individual clergymen are often urgent, they will not be suffered, either by their Ordinary, or mankind, to pretend to officiate for nothing, paying themselves indirectly in some circuitous way.

If a barrister is known to solicit business, or is anxious to work for nothing, the profession cuts the offender to a man—refuses to consult with him in chambers, or to plead with him in court; if he offers his services for less than the remuneration sanctioned by custom, he is without the slightest ceremony turned out of his profession. Have we honorary judges, honorary ministers of state, honorary bishops, honorary admirals, generals, colonels, captains? Have we honorary clerks in public departments, honorary tax-gatherers, honorary excisemen?

There may be, but we are not aware of it. Yet we doubt not that many noblemen and gentlemen would command regiments of guards, not only for nothing, but very willingly pay large sums for that honor, only they will not be permitted graciously to be pleased to do work badly for nothing. Mute inglorious lawyers might possibly be glad to take a turn on the woolsack now and then, and handle a chancery suit, for the same reason that a "thankee for nothing" doctor takes a dispensary—for the practice. But tampering with the property of the rich is a totally different thing from tampering with the sufferings and lives of the poor, and instead of sitting on the woolsack for nothing, Lawyer Greenhorn must promenade the Hall at the same price, while Doctor Greenhorn, his brother, becomes an "honorary" in the only profession encumbered with such honors. We should not wish for a heartier laugh than that which society would raise against the snug Tractarian curate, who should offer to do the duties of his Grace, the Archbishop of Canterbury, for coals, candles, and the run of the archiepiscopal kitchen! From the banker's clerk to the bishop—from the chancery clerk to the chancellor—from the corporal to the commander-in-chief, the condition of service is responsibility, and the equivalent of responsibility is pay.

2.

American Intelligence and Editorial.

Medical Jurisprudence.—At a special term of the Court of Oyer and Terminer, held at Troy in July last, Hon. A. J. Parker presiding, Henry G. Green was put upon his trial for the poisoning of his wife, by giving her arsenic. Drs. Christie, Wright, Cook, and several other physicians were examined as witnesses ; the substance of their testimony is embraced in the following deposition of Mr. Wright :—

"Doct. John Wright, sworn on the part of the prosecution, says—I am a practising physician and surgeon in Troy; I have been practising 10 or 12 years; I assisted with Prof. Cook and Dr. Christie to analyze a stomach last winter, which was said to be Mrs Green's from Berlin, at the Rensselaer Institute Laboratory. I examined the coat of the stomach. I found the mucous membrane thickened and softened, covered by a thick coat of mucus, the whole surface presenting a gelatinized appearance like jelly; found some white and black particles imbedded in this mucus. I could see 40 or 50 readily with my naked eye by holding it up on the hand. The stomach contained about an ounce and a half of brown fluid; some small white points and some small black points were included—by points are meant particles; the black particles probably came from toast water, &c.; examined the stomach on Saturday, the 22d of February. Dr. Christie brought the stomach to the Laboratory; was present when the bottle was opened; it was a two quart packjar; it would have exhibited a fetid odor if it had not been preserved in some manner; arsenic is likely to have produced that preservation. On examination with a microscope discovered numerous other particles white and black, imbedded in the mucus; the color might have changed; I took therefore no notes of that; inflammation would cause the thickening of the mucous membrane. Witness cannot say how large a portion of the stomach was thus covered; this coating was nearly over the whole stomach; the general aspect of the whole stomach presented an unusually gelatinized appearance; the stomach was not distended; mere inflammation may produce this appearance; this gelatinized state of the stomach is said in the medical books to occur when persons are poisoned with arsenic; the thickening and softening of the stomach particularly.

"The white particles discovered were arsenic; the indications of arsenic were sufficient to account for the death of the deceased. Arsenic sometimes produces an inflammation of the stomach; it depends much upon the amount and mode of administering the arsenic, whether it produces it; arsenic acts powerfully upon the nervous system, particularly when given in large doses;—produces a general prostration of the vital system, and death often occurs in a few hours. The symptoms which ordinarily appear on taking arsenic, besides those mentioned, are a burning sensation, vomiting and a stricture across the chest, sometimes spasmodic action. Four to five grains of arsenic will produce death, but a less quantity is highly dangerous; a burning sensation of the œsophagus and throat are also symptoms; the first effect, where vomiting occurs, would be to accelerate the pulse, the extremities become cold as death approaches, has the effect of making the patient thirsty, usually; once examined and saw a patient supposed to have died from the effects of arsenic.

"Cross-examined by Mr. Spencer.—Inflammation of the stomach would produce similar effects; but not ordinarily; do not say but that it may be produced by inflammation; inflammation occasions the collection of mucus, but does not always produce it; cannot say what quantity of arsenic was found in the stomach; witness has seen a case of cholera morbus where the same symptoms were exhibited."

The whole amount of arsenic found in the stomach was from four to six grains. It clearly answered the tests, as laid down by Christison and others. The prisoner was brought in *guilty*, and is to be executed. What rendered the case very remarkable, was, that the victim was young and beautiful, had been married to the prisoner but four days, when he commenced giving her the poison; and that she continued to take drinks, food, &c., from him, up to the time of her death, one week after her marriage, although she must have known that everything offered her by him, contained poison, as she declared just before death. In one instance, a white substance was found floating on some soup, which he offered her, and on analysis, it proved to be arsenic. The symptoms were severe pain at the stomach; constant vomiting; great thirst; feeble, quick pulse; pale, contracted features; extremities cold; gasping for fresh air, and complaining of want of breath; great heat of the stomach and bowels; turns of sinking; cramps in the hands, fingers and arms; severe and frequent paroxysms of distress; feebleness of voice, &c. The physician that called, supposed the case to be one of cholera morbus; although circumstances led to the suspicion that arsenic had been administered.

Quinia in Typhoid, and all other Fevers.—Prof. Mitchell, of Transylvania University, in a communication published in the "Western Lancet," for May, 1845, advocates the free use of Quinine, not only in remittents, but in typhoid, typhus, congestive, yellow, " and it may be all the fevers named in the books." To quote his language—" the position I assume here, is, plainly and boldly, this: *there is but one feature or element in either of the fevers named, that is essential to its pathology, and that feature or property, or element, bows before the potent sway of the* Sulphate of Quinine." He gives several instances illustrating the practical application of these views. It is to be regretted, however, that they are not more numerous, and given at length, with more detail. We should also have been glad to have had a more full and explicit account of the doses which he is accustomed to administer, together with the circumstances affecting the quantity of the dose and its repetitions. He recommends its endermic application in cases in which it is liable to offend the stomach, by means of a cerate, containing it, which is applied to a blistered surface.

Prof. M. is certainly correct when he intimates that the views which he has thrown out in the article alluded to, will strike the minds of a considerable portion of the profession with surprise. We are, however, prepared for them, having been aware of the fact that they are entertained, and practically carried out by many western practitioners. We have been informed that some who have adopted these views have found them so eminently valuable as means of successful practice, that they have endeavored to appropriate the great advantages which they are supposed to give, by maintaining secrecy, and professing to have discovered a therapeutical method peculiar to themselves. Indeed, we have been told that not only in fever distinguished as idiopathic, but even in the febrile movement symptomatic of local inflammation, this remedy is appropriate and potent in its influence; and that it is by some practitioners freely given under these circumstances with the best results. We have ourselves recently witnessed a single case of pneumonitis, in which in the active stage of the disease, it being determinable both by rational and physical signs, ten grains of Quinia were prescribed in the morning and repeated at evening, for two successive days, and in the meantime, or immediately following, the febrile symptoms became strikingly less, and the general condition of the patient greatly improved. We are by no means prepared to deny that the amendment in this case was merely a coincidence. A single fact of this kind, of course, affords no occasion for a positive deduction. Negatively, however, this single case is valuable. It goes to prove, at least, quite conclusively that the remedy may be given in large doses, under such circumstances, not only with impunity, but without interfering with the march of the disease toward a favorable termination. This is, certainly, a fact of not a little importance.

Having had some experience with the use of Quinia in large doses, in the treatment of Intermittents: having recommended its administration with boldness and freedom in Remittents under certain qualifications; and having expressed our belief, that acute local inflammation coincident with Intermittents constitutes no solid objection to its use in sufficient quantity to effect the specific object: (see "Am. Jour. Med. Sciences," new series, vol. xi., p. 224) we are perhaps more accessible to views which would extend its useful application over a much wider sphere. But in making this remark we do not wish to be understood as concurring with the views entertained by Prof. M. and others. We are sufficiently impressed with their interest and importance to desire the collection and publication of facts, to serve as data for some positive deductions. We wish to have a series of careful observations, made by competent observers. If Prof. M. or others have not now the materials, they might be easily collected in a short period with a little effort. Let a sufficient number of cases of the different varieties of fevers, distinguished as continued fevers, be submitted to the therapeutical principles of which we are speaking, and carefully recorded; we shall then have definite, palpable results, upon which to base positive conclusions. Until these data are furnished, it would be absurd and unphilosophical to form an opinion; the evidence, however, which the article of Prof. M. presents, should suffice to authorize a trial of his principles. Let this be done by different individuals, and records carefully made, and the results will, if brought together, probably soon suffice, either to establish a truth which will prove of immense practical importance, or, on the other hand, to disprove a doctrine, which, if not true, can hardly fail to be pernicious.—*Buffalo Medical Journal.*

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Gastrotomy.—An interesting case in which the operation of gastrotomy was performed was recently communicated to the Tennessee Medical Society, by Dr. J. E. Manlove, and forwarded by vote of the society, to the "Boston Medical Journal," where it may be found—No. for July 23d ult. The circumstances were briefly, as follows:—The patient, a colored boy, after costiveness for twelve or fifteen days, was taken with general uneasiness in abdomen, and febrile excitement; copious blood-letting, and cathartics of various kinds, introduction of flexible tubes, &c., failed in producing a fæcal evacuation; great tympanitis took place, with vomiting, difficult breathing, full and quick pulse, and in short, the indications of speedy dissolution. This was on the 4th day after Dr. M. was called. It was then decided to perform gastrotomy. An incision was made in the median line, commencing about two inches below the umbilicus, and extending down toward the pubis, four or five inches. The peritoneum and bowel along the lower half of the incision had formed a most intimate adhesion, and in cutting through the former, an opening of about one fourth of an inch in extent was made in the latter. From the opening there proceeded large quantities of flatus and liquid fæces, as well as the oil and turpentine which had been taken. On further examination it was discovered that the intestines were united to the peritoneum by extensive adhesions at various points within the reach of the finger and probe. The wound was closed by sutures and adhesive straps, except the opening into the intestine. The amendment in all the symptoms in one hour was astonishing. On the next day his appetite was good, and he continued to improve and to discharge the contents of the bowels through the artificial anus until the 17th day after the operation, when the bowels acted naturally, the opening being nearly closed."

At the meeting of the society (nine months after the operation), the boy was exhibited, being perfectly well.

The reporter advocates the propriety of gastrotomy in cases of hopeless obstruction from torsion, invagination, or other causes, as affording a chance of success, and at least, a prospect of temporary relief and prolongation of life. The result of the case, given above, certainly seems to sustain the correctness of this doctrine; yet, in this case, the success seems to have been due to a happy accident. The incision luckily was made in the right place, and the accidental opening into the intestine equally fortunate. If the result in this case encourages the trial of it in other cases, we fear that few, if any, will be reported.—*Buff. Medical Journal, August.*

Circular of the Surgeon General.—The Surgeon General of the U. S. A. has issued a circular to the officers of the medical staff, directing them to make trial of *Salicine* (the active principle of the bark of the common *willow*) which has been recommended for its *febrifuge* and *anti-periodic* virtues, and to report their observations, on or before the expiration of the current year. He intimates that the results will be given to the profession.—*Ibid.*

Medical Appointment.—We learn that T. Rush Spencer, M. D., late adjunct Prof. of Mat. Med. and Pathol. in Geneva College, has received the appointment of Professor of Materia Medica in Willoughby Medical College, Ohio, and has signified his acceptance thereof. Dr. S. has a reputation for talent and acquirement, with a facility for teaching, which promise a career of usefulness and honor in the responsible duties upon which he is about to enter.—*Ibid.*

The Medical Schools of New York.—It is our design to keep our readers apprised of what is doing in this city for the cause of Medical Education, and we therefore give below a complete list of the Graduates of both Schools, during the past season. It ought to have appeared sooner, but we were never put in possession of all the names until recently. We may remark that the address to the Graduating Class at the "College of Physicians and Surgeons," was delivered by the President, A. H. Stevens, M.D., and that to the class of the City University, by G. S. Bedford, M.D., both of which were able, and well received. The auspices of our city schools were never more favorable than at the present moment, and their means of successfully prosecuting the great work of medical Education, never more efficient. Those whose means enable them to attend a course of lectures in the city, will find everything in New York that is desirable for ensuring thorough medical instruction, and as many advantages of clinical teaching as they will be able to avail themselves of, during the period of the Lectures. In this respect, we suppose that New York is superior to any of our large cities. Both of these institutions have our best wishes for their continued prosperity and success; and from the zeal, energy, and talent of their respective faculties, we doubt not they will continue to draw large classes of students from every part of our country.

Graduates of the Medical Department of the University of the City of New York, 1845.—Thompson Wilson, S. C.; David L. Simpson, Ky.; George A. Wattles, Ala.; Charles W. Hodges, S. C.; Joseph Quattlebum, do.; James S. Meng, Miss.; James M. Nash, Ala.; Henry M. Jeter, Ga.; Robert A. Buchanan, S. C.; William R. Lowry, Ga.; Wm. J. Alexander, Va.; Isaac Tanner, do.; Aristus Brown, N. Y.; Damon H. Palmer, do.: George W. Parkhill, Fla.; George G. Gaither, Ky.; Robert L. Waterbury, N. Y.; Charles A. Hyde, do.; James E. Joslen, R. I.; Solomon G. Carpenter, N. Y.; Albert W. Burch, do.; Henry Orlady, Pa.; W. Otway Owen, Va.; Chester W. Cowles, Vt.; Washington M. Ryer, Ill.; L. Wells, Hibbard, Vt.: M. C. Richardson, Me.; John O'Leary, Va.; Robert W. Coleman, S. C.; E. R. Dabney, Tenn.; J. F. Lindsley, S. C.; Jeremiah Brooks, Pa.; Joseph N. Evans, Ga.; Calvin F. Ashley, N. Y.; William M. Spencer, do.; David O. Mosser, Pa.; Samuel H. Lee, O.; John M. Gregory, Ga.; S. W. Harvill, Ala.; Leonidas Collins, N. C.; W. Henry De Courey, Md.; John L. Crane, N. J.; Edward Perry, Ct.; Cyrus Arndt, N. J.; A. R. Wellborn, Ga.; Wm. A. Bennett, Ct.; John Orme, Pa.; Alfred O. Bradley, N. C.; Charles T. Mount, Canada W.; Daniel L. Reeves, N. Y.; Enoch

Green, do.; Benjamin S. James, S. C.; Marcus L. Taft, N. Y.; J. H. Vanderveer, N. J.; Joseph W. Livingston, N. Y.; John N. R. Alvord, N. C.; Horatio N. Buckley, N. Y.; John S. McKay, do.; Ralph A. Snow, do.; David A. Telfair, N. C.; Wm. H. Huntingdon, Vt.; John D. Roberts, Ala.; Darius A. Dow, N. H.; John D. Fish, Ga.; Robert D. Dickson, N. C.; Wm. W. Banks, Va.; John Witherell, N. B.; Wm. F. Fair, N. J.; Thomas E. Gorman, Ga.; Thomas B. Kinnerly, S. C.; John McGregor, R. I.; George Flower, Pa.; Jeremiah B. Selby, Wis.; George W. Clippinger, Pa.; George M. Tutt, Ga.; John N. Cole, N. C.; Robert Staton, do.; Jesse Myer, N. Y.; Gabriel P. Reeves, do.; Philip A. Aylett, Ala.; Daniel E. Warren, Tenn.; C. V. Moore, N. Y.; James M. Nail, Ala.; James A. McRae, N. C.; W. A. Babcock, Ct.; Alfred Brush, Mich.; Edward Lauderdale, N. Y.; Wm. Hillhouse, do.; George Douglass, do.; W. B. B. Temple, Ala.; Wm. J. McNamee, N. Y.; Newton C. Cooley, do.; Thomas D. Washburn, Mass.; S. S. Satchwell, N. C.; John Hill, Ct.; D. A. Knapp, do.; I. Everest Swift, do.; Peter A. Mullen, N. Y.; W. E. Dunwody, Ga.; Henry H. Button, N. Y.; Josiah Brown, N. H.; John A. Preston, N. Y.; Ebenezer McFarlan, do.; Edwin C. Witherell, do.; S. D. Brantley, Ga.; F. C. Blackwell, N. J.; Robert T. Flewellen, Ga.; George H. Batchelder, N. Y.; E. W. Kirksey, S. C.; Miles A. McLeod, Ala.; James A. D. Gregg, N. H.; S. B. Crocheron, Ala.; Joseph Oliver, N. Y.; Charles Hempel, do.; Orlando, M. Bryan, do.; Daniel Ayres, do.; Alonzo F. Eisenlord, do.; David E. Breining, Pa.; William C. Burke, N. Y.; John Henry Stafford, do.—Total 120.

List of Graduates from the College of Physicians and Surgeons, March 15*th*, 1845, 35. *September*, 1844, 3. 38 *in all.*—Jarvis M. Andrews, Charles H. Andrus, Gorham Beals, Ira B. Blakeman (Graduated Sept. 1844.), Alfred Bowlby, Charles Burrell, Nicholas H. Chesebrough, Samuel P. Church, James Guyon Clark, John P. Connor, Alexander N. Dougherty, jr., O. Wolcott Gibbs, Samuel F. Green, John L. Gardiner (Graduated Sept. 1844), Howard R. Harrison, Samuel R. House, Frederick Z. Hurxthal, Geo. Evans Kinne, Joseph LeConte, Robert H. Littell, John L. Mitchell, Henry Moreton, Israel Moses, Wm. Neergaard, Jotham Post, Stephen E. Ranney, Justo M. Del Risco, Thomas Robbins, Clement F. Shiverick, James R. Smith, Edwin B. Stimson, I. Dwight Stickney (Graduated Sept. 1844), Owen Sweeney, Harvey Taylor, Everardus B. Warner, George Wilson, H. W. B. Woodhull, Van Brunt Wyckoff.

These *all* received their *degrees* in March, though some graduated at the Fall commencement.

"*The Half-Yearly Abstract of the Medical Sciences:* A Practical and Analytical Digest of the contents of the principal British and Continental Medical works published in the preceding six months, together with a series of critical reports of the progress of medicine and the collateral sciences during the same period."—(BY RANKING).

This publication appears to be got up on a plan similar to that of Braithwaite, but carried out with more system, far greater care and attention to record everything valuable in every department of medicine. We have carefully examined the first volume of near 400 pages and find it a complete epitome of the contents of late German, French, and English Medical Literature, as it is also of standard valuable works and monographs recently published. The Prospectus states that the periodical works alone which are referred to in the "abstract" involve an annual expense of more than 100 dollars, exclusive of standard works. The subscription price in England is 13*s*. sterling, or about $3.25;—we regard it as altogether the best work of the kind we have ever examined.

Extract from a letter of Dr. C. La Ford, of Medina, New York, to the Editor.

Crepitant Rhonchus of Pneumonia.—Various explanations have been given of the above phenomenon. Watson (*Lectures on the Principles and Practice of*

Physic, p. 504) thinks it results from the passage of air through liquid; from the formation and bursting, in quick succession, of a multitude of little air bubbles. On the same page I find the following: "He (Dr. Williams) holds that the distended blood vessels and the interstitial serous effusion, press upon the minutest bronchial ramifications, and obstruct, without wholly preventing, the passage of the air through them: that these small tubes are lined by a viscid secretion, such as is expectorated, and such as I shall have to describe: that the sides of the tubes stick together in consequence of the presence of this viscid matter; and that it is the separation of these adhering sides by little portions of air, which successively pass in and out, that gives rise to the characteristic sound."

On looking at the Cyclopœdia of Practical Medicine, vol. iii., page 606, I find the following language of Dr. Williams on that subject:

"The distended vessels and the serous effusion in the interstices press on the minutest bronchial ramifications, and partially obstruct the ingress of air into the cells to which they lead; and while the viscid secretion of the mucous membrane, simultaneously inflamed, filling the calibre of the tubes thus narrowed, only yields to the air in respiration, forcing its way through it in successive bubbles. This bubbling passage of air through a viscid liquid, contained in an infinity of tubes of equally diminished calibre, causes that regular and equable crepitation which constitutes the true rhonchus crepitans."

By this extract it appears that Williams does not give quite the explanation ascribed to him.

In the Oct. No. of Am. J. M. Sciences, for 1842, in an article entitled, "Suggestions as to the cause of Crepitant Rhonchus, by Edson Carr, M. D., of Canandaigua, N. Y.," the following passage occurs:

"I believe that M. Beau and Dr. Williams are quite correct in supposing that the bronchial membranes are somewhat dried by the existing inflammatory action, since one of the most manifest changes observed during the early stages of pneumonia, is a suspension of the aqueous exhalation from the bronchial membranes. Now, the suspension of this function necessarily leaves the mucus, with which the air passages are lubricated, in so thick and tenacious a condition that these membranes are glued together whenever they come in contact. The pulmonary tissue, being more or less compressed by the descent of the ribs and the rising of the diaphragm, during every *expiration*, the bronchial membranes are, to a greater or less extent, forced into direct contact. The capillary congestion and interstitial effusion, which are among the essential elements of pneumonia, must greatly increase the volume of the diseased lung, and consequently augment the compression of the pulmonary tissue and facilitate the adhesion or gluing together of the bronchial vesicles.

"Now, during every *inspiration*, the air rushing into and distending these vesicles, necessarily overcomes these cohesions. And would not the separating of these membranes, thus glued together by tenacious mucus, naturally produce such sounds as constitute the crepitant râle of pneumonia?"

It appears to me not improbable that the explanation of the cause of the sound in question, thus ascribed to Dr. Williams, may have been derived from the article last quoted, for I am not aware that any other writer has given a similar explanation, especially as "additions and alterations" were made in the Lectures as late as "Sept., 1843."

Medina, Aug. 12, 1845.

New Medical Schools.—Our respected contemporary, the "Buffalo Medical Journal," remarks that "it is a common impression among the profession that medical schools are becoming too much multiplied, especially those which may be called relatively provincial schools." This is not only a true remark, but it is a conclusion to which medical men have arrived from actual observation of the results growing out of the multiplication of such institutions. For the last twenty years the profession has been growing more crowded every day,—the difficulties of obtaining an honorable support by *honorable* practice greater,—the confidence of the community in it, and their respect for it, constantly diminishing, while the qualifications for graduation and license have been gradually lessened; so that at length, it has got to be a common remark, that there is as much mal-practice and quackery *in* the profession as *out* of it. Now, what are the causes that have led to this state of things? Have not the facilities for *cheap* education and *cheap* graduation had anything to do with them? Has not competition in medical teaching made the price of the commodity very cheap, at the same time its quality has been deteriorating? Instead of receiving cash for tickets, some medical schools receive promises to pay, in the shape of notes (which have usually been rated at fifty cents on the dollar), and if this does not draw, they reduce their terms, and make up the deficiency by having two lecture terms annually, instead of one (thus being in session eight months out of twelve). This hot-bed system, with the additional feature of requiring no preliminary education, except reading and writing, has drawn many young men from their "farms and merchandise," to the study of medicine, who, without these facilities would have obtained a more easy, comfortable, and independent living, by pursuing some other calling. By these remarks, we do not wish to be understood as opposed to country schools, or as expressing an opinion that a good medical education may not be obtained at some of them. We speak of the influence which their multiplication has heretofore exerted in depressing, instead of elevating the standard of professional acquirement, and leading to over-crowding the profession with half educated men. The evil has acquired such a magnitude as to have attracted the attention of our State, and many of our county medical societies (see "*Transactions of the New York Med. Society for* 1844"), and it has been proposed to remedy the evil by separating the business of teaching and licensing, or graduating, which is equivalent to it. But would this tend to diminish the evil? Would not the best plan of accomplishing it be, for our medical schools to adopt a regulation of Geneva College? in which the Board of Curators consists of forty-two physicians, six of whom are censors of the State Medical Society, who hold their office of Curators, *ex-officio*, three of whom must be present at the examination of students for graduation. The examinations are accordingly attended by the Board of Curators, which board is composed of men of distinction in the profession, who have no interest in the school, and who receive no compensation for their services. Six members (equal to the whole number of professors) are elected by the State Medical Society, and consequently, the State Society, through their censors, have an equal vote with the faculty, in recommending the students for degrees. A proposition was made at the meeting of the State Society, at Albany, in February last, to direct their censors to attend the examinations in the different colleges (if permitted), and report to the Society; but the resolution was lost. It could hardly have been anticipated that objections to the measure would have come from the faculty of any of our colleges, whose true policy undoubtedly is to throw open their doors, invite the fullest and freest inspection; and if it be thought expedient, to allow the profession, through proper delegates, to take part in the examination of candidates for graduation.

Such a plan, it seems to us, would accomplish what is aimed at by our State and County Societies; but it should extend to all our medical schools alike. Then, if improperly qualified persons are admitted to graduation, the fault will lie equally at the door of the State Society and the colleges; for through its delegates, it will have a *veto* power over the professors. This plan has worked admirably well at Geneva, and has, no doubt, contributed to the usefulness and respectability of the school, and to place it on its present elevated footing. Until some such plan is carried out, the opinion will, to a great extent, prevail, whether there be any good foundation for it or not, that unworthy persons are admitted to the honors of the Doctorate. While then, we admit that the overcrowded state of the profession, and the low standard of medical education are owing, partially, to other causes, we do maintain that the multiplication of medical schools, has had a powerful influence in contributing to this result, and that it is the duty of every medical man, who wishes well to the profession, to oppose their further increase, *where they are not particularly wanted.* A few years since application was made to the Legislature of Massachusetts for a charter for a new medical institution at Lowell: the question was asked, does Massachusetts need another medical school in addition to the two it has already? The answer was in the negative, and the charter was accordingly, very properly withheld. We were glad to hear of the establishment of a new school at Chicago, because we believed such an institution necessary to supply the wants of the people of Illinois, Indiana, Wisconsin, and Iowa; but we are at a loss to know why two schools are necessary for Northern Ohio, within twenty miles of each other; or why there should be two schools at St. Louis, and two at Cincinnati.

Were there room for *five* physicians, taking the country at large, where there is now but *one*, instead of there being *five* where one only is wanted, we would say, by all means, give us more schools, increase the facilities for medical education, till they shall be adequate to the wants of the community; but we deem it bad policy to overstock a market, already *drugged;* or to administer a dose, too powerful for the already over-dosed patient to bear. The reform that is needed, will best be secured by raising the standard of literary, scientific, and professional acquirement in order to graduation in schools already established, and guarding the avenues to the profession with a more vigilant watch. When this is done we shall need no special legislation for the suppression of quackery, or for guarding the rights and interests of the profession; a barrier will be erected between science and empiricism, knowledge and ignorance, so lofty and impregnable, that encroachments and depredations will not be feared, nor will the public be liable to mistake a regularly educated physician for an uneducated quack.

New Edition of Cazenave on Diseases of the Skin.—Dr. H. D. Bulkley, of this city, has nearly ready for the press (Langley's) a new edition of this excellent work, revised and corrected, with additional notes; results of his own personal experience in the treatment of this important class of diseases. Dr. B. has been at the great pains of comparing the translation with the original throughout, which has enabled him to correct many errors, and restore numerous passages, omitted in former editions. Dr. Bulkley is extensively, and favorably known, as a lecturer on cutaneous affections for the last nine years in this city, and as a practitioner of more than ordinary skill, and we have no doubt he will greatly enhance the value of the work which is to appear under his editorial supervision. The work, we are informed, is now nearly or entirely out of print; the translation that was published in this country, was from the *first*, whereas, the present is from the *third* and latest French Edition.

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Velpeau's Operative Surgery.—We are happy to state that this great Surgical work is rapidly hastening to its completion, under the able supervision of its Translators and Commentators, Drs. P. S. Townsend & Valentine Mott. The 2nd vol. will be published in October next, and the succeeding and last volume, in July, 1846. We rejoice to learn that Dr. Mott will record in separate chapters, the results of his vast experience, and especially as connected with the tying of arteries; a department of his art, in which, Sir Astley Cooper remarked, toward the close of his life, that Dr. Mott had had more experience than any man living or dead. We shall not fail to notice the work as soon as it appears. Langley, Publisher.

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We have received a Prospectus of a New Medical Periodical, to be entitled "*The Louisiana Medical and Surgical Journal. Devoted to Medicine and the Collateral Sciences.*" To be Edited by *John Harrison, M. D.*, Professor of Physiology and Pathology in the Medical College of Louisiana—and *William M. Carpenter, M. D.*, Professor of Therapeutics and Materia Medica in the Medical College of Louisiana. The Journal seems to be formed on a plan very much after our own, as it is to be a *bi-monthly*, each No. to consist of 144 pages, and the arrangement of the materials also the same: terms 5 dollars a year. The object of the new Journal will be "to bring forth the industry and talents of the South, and to furnish the most recent information of its progress generally." We doubt not that under the able management of the gentlemen whose names are announced as its future Editors, the new Journal will command the patronage of the profession throughout the Southern section of our country. It has our best wishes for its success and prosperity.

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Hydro-Electrical Machine.—We copy from the Electrical Magazine for July, the following description of a new Hydro-Electrical Machine just imported into this country, and now in operation at Castle Garden, in this city:

An extraordinary sized electrical machine has just been completed for the United States, by Messrs. Watson & Lambert, of this town (Newcastle), which is called after the great American philosopher, "Benjamin Franklin." The effects of this steam electrical machine are, indeed, truly surprising, far excelling anything ever yet accomplished by man in this important branch of science. It was put in operation on Thursday, in the open yard of the manufactory. The weather was most unpropitious—it never ceased raining; but, independent of this difficulty, the spark obtained from the prime conductor was 20 inches in length, at the rate of 200 in a minute. It was shipped yesterday on board the Spring, for New York, where, we understand, it is to be used in the Polytechnic Institution, established in that city. The Americans will, in the acquisition of this wonderful instrument, possess by far the most powerful electrical machine in the world, it being three times the capacity of the one used at the Royal Polytechnic Institution in London, which has been the source of gratified astonishment to all who have beheld its truly magnificent results. As many of our readers may not have had an opportunity of inspecting this Leviathan machine, we may briefly describe its construction. The steam-boiler, which is insulated by glass pillars, is constructed upon the locomotive principle, having a fire contained within, and passing through tubes, which are surrounded by water, into the chimney. There is a glass gauger attached for regulating the quantity of water in the boiler; also a safety valve to relieve the pressure of the steam above a certain point. There are two hollow metal arms issuing from the upper part of the boiler, to each of which are attached seventy small tubes, the ends of which are furnished with proper jets, and by the passage of the steam through these the electricity is produced. There is a junction pipe, fitted with a cork, for the purpose of shutting off one of the arms, and using only one half of the power of the machine, or by keeping it open, the whole power. The rows of pipes which are fitted to the metal arms, and through which the steam issues, are enclosed and surrounded by a casing or box, for the purpose of holding water, for producing a condensation of the steam in its passage through the pipes previous to its emission from the caps on their extremities. This condensor, as it is called, is supplied with water as it is required, by vessels placed above, having pipes communicating with them; and there are pipes connected with the condensors, for collecting and carrying away into the chimney the vapor produced by the water becoming heated in consequence of the passage of the steam through them. The steam from the jets is blown against four rows of forks placed on framework, and supported by insulated legs. When the machine is in action, positive electricity is rapidly produced, and may be collected at the ball in connexion with the forks; and the negative electricity may be obtained from all parts of the boiler. —*From the Newcastle Journal of May* 24, 1845.

Petition to Prohibit the Use of Mercury in Medicine, by Law.—At the last Session of the Legislature of the State of Pennsylvania, the citizens of Westmoreland county petitioned for the passage of a law prohibiting the use of Mercury in the practice of Medicine; and we now have before us the Report of the select committee to whom the matter was referred. The committee enter upon their task with all due gravity, determined to give the subject "all that consideration that its importance demands," and we must say they have made out a very satisfactory defence of this slandered, much abused, and persecuted mineral. They give us its natural history, its modus operandi, and its uses and applications in various diseases; they state that it forms the active ingredient in the *panacea* of that prince of quacks, *Dr. Swaim*, and they very forcibly remark that "the health, even the lives of thousands of individuals have doubtless been sacrificed at the shrine of this modern Juggernaut, and it is not impossible, but that some of the petitioners themselves may have laid aside the cup from which they had just quaffed the deadly poison, to take up the pen and sign the memorial before us!"

The committee display a degree of shrewdness and common sense on this subject, which does great credit to their intelligence as *laymen*, and which may well put to shame, some, who boast of superior knowledge and a complete medical education.

The Report closes as follows:—

"Your committee have thus briefly glanced at both the sanative and deleterious properties of the article in question. That an agent so powerful, exercising almost unlimited control over the organic functions, should, when improperly applied, be productive of corresponding evil, will be readily conceded—and that a large amount of mischief *has* been done, will not be denied. But that the occasional abuse of a valuable agent has ever yet been deemed sufficient grounds for the prohibition of its *use*, your committee have yet to learn. As well might the surgeon be forbidden the use of a keen bistoury or lancet, for fear of cutting too deep—or the barber the employment of a keen razor, to prevent him from cutting the throat of his employer!

"In short, it may be laid down as a position that defies refutation, that an agent that can do no harm *can do no good!* If the principle of excluding from the materia medica all articles that *may* do harm were adopted, the result would be that the practitioner would be confined to a very meager class of means, and those of a useless and inert character. His hands would be tied, and while, with anxious solicitude he watched over the effects of his bread pills and his gum water, he would be compelled to stand by, with folded arms, while contagion, gangrene and death stalked fearfully over the land, deprived of the power of even attempting to save.

"Far better would it be, to strike from the list of the learned professions the title of M. D., and at one fell swoop banish from among mankind the use of all remedial agents—proclaim at once, over the length and breadth of the land, that we, in the superlative acumen of legislative wisdom, in the nineteenth century, had made the startling discovery that the result of all the investigations and experience of ages, from the days of Galen and Æsculapius, down to the present eventful epoch, amount to nothing but dross, to be ground into ashes and scattered to the winds.

"It is natural that prejudices should subsist among mankind. The greatest blessings that have yet been conferred on a suffering world have been received with reluctance, or rejected with scorn, by the biased or skeptic portions of the community—even the invaluable revelation of the inspired Jenner, which has nearly swept from the catalogue of diseases that awful scourge of the human race, the *small pox*, was not exempt from the common lot. And at the present enlightened day, when the experience of half a century has fully established its benign influence, vaccination still has its opponents. And thus it will continue to be, with regard to all great discoveries, as long as the human mind is constituted as it now is.

"But why the mercurials should be selected as the target at which the envenomed shafts of the interested or misguided are to be pointed, your committee are at a loss to conceive. It is well known that the materia medica embraces a large class of remedies, both mineral and vegetable, possessing far greater activity on the system than the one in question. Are the memorialists unaware of the direful effects of arsenic, when improperly administered, either in large or small doses—or are they ignorant of its extensive and daily use as a medicament? Are they aware of the properties of the muriate of gold, the nitrate of silver, the sulphate of copper, or the prussiate of potash? Or, entering the domains of the 'vegetable kingdom,' among the mazes of which certain sects of modern innovators delight to revel—are they unacquainted with the properties of the belladonna, the hyosciamus, the strichnos nux vomica, the stramonium, the colocynth, the elaterium, and a host of other members of the vegetable tribe, the one-half of a grain of the extract of which may prove a dangerous or even fatal dose? Is the prussic acid, extracted from the kernel of the peach stone, one drop of which applied to the tongue or eye produces instant death, unknown to them? Have they not heard of the oil of croton, one drop of which is a dangerous dose? Or of the sulphate and acetate of morphia, of which the dose is *one-eighth* of a grain? And are they not aware that all the above enumerated articles, and many others of equal activity, are in daily use, and frequently attended with the most beneficial results? If not, we would respectfully suggest to them the propriety of devoting a portion of their attention to the subject, in preference to embarking on a crusade against one of the safest and most efficient remedies on the list of the materia medica.

"For the above, and various other reasons, the committee deem it inexpedient that the prayer of the petitioners should be granted."

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Oxalic acid in the Pie Plant.—A family of four persons were recently poisoned in Buffalo, by eating of the *leaves* of the domestic Rhubarb, or Pie Plant, boiled and served as greens. The effects were those usually produced by acrid poisons.

Lieut. E. R. Long, M.D., of the United States Army, has recently analyzed the plant, and published an account of the analysis in the Buffalo Medical Journal, for July. According to his experiments the small bundles of pie-plant found in market, weighing about one pound, contain a little more than ℈j., of the acid. Dr. Long remarks, that "the minimum fatal dose of the crystalized acid on record in standard works is ℥ss; but it would doubtless be unsafe to take a much smaller dose than this of the acid in a free state. Yet as the dilute acid is regarded and used as a safe refrigerant in fevers, and as a portion of it in the pie plant exists in combination with lime and is therefore inert, it would seem hardly probable that any deleterious effects would result from the ordinary use of the plant. In a case of suspected poisoning from this acid, the proper antidote is carbonate of lime, or carb. magnesia, as these form insoluble salts with the acid.

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The Adulteration of Medicines.—We have some startling facts to communicate on this subject. The extent to which the adulteration of drugs is carried in this and foreign countries, surpasses all belief, and the practice has, of late, astonishingly increased. We purpose ere long to make a full development of the facts in relation to every article that is adulterated in our market, or abroad, and for this purpose we ask the aid of all who are acquainted with any facts bearing on this matter. Credit will be given when desired, otherwise names will not be published. We hope to commence our *exposé* in our next number.

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Hufeland.—Perhaps there is no physician of the present age, who has done more to honor and dignify his profession, than the celebrated Hufeland. His character is a model for imitation by all who wish to acquire true glory themselves, or render their Art illustrious in the eyes of the world. His heart seems ever to have been a stranger to "envy, hatred, malice, and all uncharitableness;" and in the following precepts he has merely pointed out the principles which were the polar star of his own professional life.

> Nothing is more difficult than to judge others; but nowhere is it more so than in the practice of medicine. It is, therefore, unpardonable in the public; but it is revolting to hear physicians, who know the difficulties of the art and of forming opinions regarding it, judge their colleagues with severity, harshness, contempt, or disclose their faults, and try to raise themselves by lowering others.
>
> Oh! that I were as able to impress the minds of my brethren with the truism, as forcibly as I am impregnated by it: He who degrades a colleague, degrades himself and his art.—For, in the first place, the more the public becomes acquainted with the faults of physicians, the more will physicians become exposed as contemptible and suspicious, and the more will such exposure impair confidence; and confidence in the whole body being diminished, every single one, and the censurer included, will lose a share of it. The public would be less prone to censure the medical profession, and its faults would not be a favorite topic of conversation, if the members themselves did not broach it, and set the bad example. It shows a shortsighted selfishness, and want of all common spirit, when a physician acts in such a manner, and thereby hopes to raise himself in the same proportion as he degrades others. Further, such conduct is in opposition to the first principles of morals and religion, which commands us not to lay bare the faults of others, but to overlook and excuse them. Such a character will be more lowered in the esteem of sensible men, than he whom he endeavored to degrade; for the detracted loses only as an artist, while he loses as a man, and a bad action

is esteemed worse than a bad medical treatment. Finally, they should reflect, that the same measure they apply to others is applied to themselves. He, who treats others in a harsh and haughty manner, may rest assured that he will be dealt with in the same way—which is but justice. Modesty in conduct and judgment behooves every one, most of all a young physician; it will procure him friends and opportunities for instruction, and promote his external interests as well as his internal improvement.

It is always indicative of a deficiency of mind, or of knowledge, or of malignity and bad conscience, in a physician, to speak ill of his colleagues, and it behooves the honest practitioner, when he is asked his opinion, to excuse himself from giving it, by saying that it is impossible to judge in medicine, without a most accurate knowledge of the case; or if this is not practicable, to give explanations favorable to his professional brother, which is not a difficult thing to do. Thus he will ever respect himself and his profession.

We regret to have to record the death of Professor Thomas Sewall, M.D., of Washington, D.C., which occurred on Monday, the 10th of April, in the 59th year of his age. Dr. Sewall was a native of Augusta, in the State of Maine. He graduated at the Medical School of Boston, and about the year 1820 removed to the city of Washington, where his talents and acquirements, with an upright deportment and great urbanity of manners, soon procured for him the respect and patronage of a large portion of the inhabitants. He was appointed Professor of Anatomy in the Medical School of that place on its first organization, and continued to discharge the duties of the Chair, with distinguished ability, until the time of his death. By the public prints we observe, that the members of the profession of the city in which he resided, and the students of the College to which he was attached, adopted suitable measures to express their grief for his loss. Besides these, his remains were followed to the grave by a large concourse of people, including a number of eminent statesmen, and the distinguished citizens of the place.—*Med. Examiner.*

The Alms-House and Dr. Hasbrouck.—We regret to hear that Dr. Hasbrouck, resident physician at the Alms-House, is still suffering from the effects of a fever which was taken during the late warm weather, and increased, if not entirely produced, by over exertion in the sick ward. Several severe cases of ship fever at that time required great care and skill on the part of the physician and his assistants. Dr. Hasbrouck, though half-worn out with arduous attention to his duties, and, of course, more liable to infection on that account, insisted on bestowing his personal attention on the ward. Very often his state of health should have confined him to his own room. The consequence was, he became a victim to the fever, and is still considered in a very precarious state, though slowly recovering.

By a judicious choice of assistants, a majority of whom are graduates of great promise, Dr. Hasbrouck has saved the Alms-House department from suffering as it might otherwise have done from his illness. Indeed, so far as we can learn, the whole medical department has been efficiently managed since he went into office. At the small-pox hospital there has occurred, we are informed, but one death. At the Children's Hospital, which is under the immediate care of Dr. Joseph Winterbotham, there prevails less of sickness than is usually known at this season. Those diseases incident to children which were most liable to be aggravated by the late intolerable weather have been kept in check, and severe cases of ophthalmia have almost entirely disappeared from the hospital. Indeed, from what we can learn, in spite of a most variable season, the health department at Bellevue has been faithfully attended to, and remains in a most satisfactory condition. When we see a man fearlessly sacrificing health and risking life in a faithful discharge of his duties, it gives us pleasure to render him justice, though, as in this case, we may neither agree with him in political opinions nor be particularly partial to the party to whom he owes his appointment.—*N. York Express.*

The "New Orleans Medical Journal" comes to us regularly freighted with valuable matter, relating to diseases that prevail in the Southern sections of our country. We extract from the July No. the following article on,

Surgery in New Orleans.—For want of a Medical Journal in this city scarcely any of the important surgical operations, that have been performed in the South West, have ever been made known to the world. Almost every capital operation has, within a few years, been performed by the surgeons of Louisiana, and we now propose to notice briefly such as we have either witnessed, or have been related to us from authentic sources.

1. *Amputation of the Hip—Successful.*—Some years since, Dr. Walter Brashear, of ———, now retired from practice, performed this bold and terrific operation with a skill and success that would have done honor to the immortal Larrey. The case, we believe, has never been published, but we now take the liberty of placing the fact upon record, and beg leave to relate an anecdote in connection. During the winter of 1843–4, when the Hon. Henry Clay was on a visit to this city, we had the pleasure, together with some twenty-five or thirty physicians, of spending the evening with him at the house of a medical friend. Whilst at table, one of the company proposed "*the health of the venerable* Dr. Brashear, *the first and only surgeon in Louisiana, who has successfully performed amputation at the hip-joint.*" Mr. Clay, who was sitting by the side of Dr. B., with characteristic good humor immediately observed—"*he has you on the hip, Doctor*," to the great amusement of Dr. B. and the rest of the company.

2. *Amputation of the Shoulder Joint.*—This operation was performed at the Charity Hospital, about two years since, by Dr. Stone, for a desperate gun-shot wound. The operation was well performed, and offered the only hope of life, but the case was too desperate, and the patient soon sunk. It was also performed at the Charity Hospital, last year, by Dr. A. Mercier, for gangrene of the arm, after a maltreated compound fracture; but the case fell into the hands of Dr. M. too late, and although the operation was well performed, the patient sunk.

3. *Excision of the Parotid Gland.*—This operation has been twice performed successfully, by Dr. C. A. Luzenberg,—the first, about eight years ago; the patient is still living in this vicinity; the second was performed, in April last, upon a negro woman, about 35 years of age, for scirrhus. The gland was enlarged to nearly the size of the fist, very much indurated, and unmovable. This operation was performed in the presence of some dozen physicians, ourselves amongst them. As a preliminary step, dictated by prudence, a ligature was cast around the common carotid, *to be tightened if necessary.* Dr. L. then made an incision through the integuments around the whole base of the tumor. The dissection was then rapidly progressed with, but the hemorrhage soon became so profuse that the ligature on the carotid had to be tightened. This being done, the diseased gland was quickly, and in the opinion of all present, *completely removed.* A large and deep chasm was left in its place, which was filled with lint, covered with a compress, and the patient put to rest. The operation was well and rapidly performed, and the time occupied was about 30 minutes. The patient bore the painful operation with extraordinary firmness; having uttered but one or two groans during the time. No unfavorable symptom has followed, and the wound at this time has almost entirely healed.

4. *Amputation of the Mamma, and Ligature of the Femoral Artery.*—These operations have both been successfully performed, recently, by Dr. W. Stone; the ligature for aneurism of the femoral artery; and the amputation for scirrhus of the mamma. In the latter operation, Dr. Stone left sufficient integument to cover the wound; it was brought together by adhesive straps, and quickly united by the first intention. We saw Dr. Stone perform the same operation for the same complaint, last year. The subject was likewise a negro woman. She was frightened nearly to death, and could not be prevailed on to submit with any composure. While she was writhing and screaming with all her power, Dr. S., with characteristic firmness, proceeded with his incisions, and removed the entire mamma, as also an indurated axillary gland. The wound was then covered

with the flap, and quickly healed. It is now twelve months since the operation, and we learn the woman has no return of the disease. We have seen both of these operations performed by Dr. Luzenberg, within the last two years. Indeed, these two gentlemen have performed almost every capital operation in Surgery since they have been practising in New Orleans, and with a skill and success that would do credit to any city.

5. *Tying the Subclavian Artery.*—We have seen this difficult operation twice performed by Dr. A. Mercier; first, for false aneurism of the axillary artery, last year—unsuccessful; and very recently for aneurism of the subclavian itself; both on the left side. In the first instance, he operated below the clavicle, and the patient sunk from secondary hemorrhage. On the 21st of June last, he performed the last operation in the presence of a large number of physicians and other spectators. The subject was a negro woman, aged about 30 years. She belonged to a baker, and had long been in the habit of carrying a basket of bread upon her head which she held chiefly with her left hand. The aneurism made its appearance about eight months since, and continued to grow until it attained the size of a man's fist; situated just below the clavicle, and extending from the axilla half way to the sternum. Dr. Mercier operated above the clavicle, and after the tedious labor of more than an hour, which he performed with great firmness and skill, he succeeded in fixing his ligature, and completely arresting the circulation. The case has since progressed most favorably, and there is now every prospect of a successful issue.

6. *Ligature of the External Iliac Artery.*—We are informed that this operation was successfully performed, a few years since, by Dr. H. Daret, upon a well known and worthy gentleman of this place, for aneurism situated very high on the femoral artery. The gentleman may be seen any day on our streets, and is indebted to skilful surgery for his life.

7. *Ligature of the Carotid Artery.*—This operation has been often performed in this city, but we cannot forbear mentioning the following interesting case. A few years since a gentleman of Natchez, Mississippi, had the misfortune to receive a pistol ball about the centre of the left cheek. It penetrated deeply, and the hemorrhage was so profuse as to place the life of the gentleman in the most imminent danger. Several days afterwards he was brought to this city in this perilous situation. He arrived here in the night, and Dr. Stone was called to see him. He at once saw that the only hope depended on tying the carotid; he immediately performed the operation by candle-light, and with complete success. The gentleman is now living in this city.

8. *Excision of the Maxilla Inferiora.*—This operation has been successfully performed three times in this city, by Dr. J. F. Buegnot, for *Osteo-Sarcoma*—the first, in 1839, by dividing the bone with a chain saw, at the symphisis, and above the angle. The second, in the same manner. The third operation was performed in 1840. The disease in this case had progressed so far, that it was found necessary to disarticulate the bone at the *tempora-maxillary joint;* and thus the entire half of the bone was removed. The patients all recovered entirely.

We have thus enumerated some of the most important surgical operations that have been performed in this city and vicinity; there doubtless are others equally important, that have not come to our knowledge. The minor operations would be too numerous to mention.

Dr. Binaghi on the spontaneous Gangrene of Mexico.—[The author of the following article is a very learned and accomplished physician, a graduate of the University of Pavia, who made himself most favorably and extensively known in this city during the prevalence of the Cholera in 1832. Dr. B. left this city for Mexico in 1833, where he has until very recently resided; he has lately removed to the city of New Orleans, where he is now engaged in the practice of his profession.]

"Among the different kinds of gangrene, such, for instance, as that which is the result of the highest degree of inflammation—hospital gangrene, that created by ergot, or by an external traumatic, physical or chemical cause, as well as that species which is the effect of the *visus in reductionem* among the aged, spontaneous gangrene particularly invites our attention; not only on account of the interest which it excites in the observing physician, but also on account of the investigations to which it gives rise, and which may in some manner become the cause of important and useful discoveries in medicine; especially since the great progress of pathological anatomy, which has contributed so powerfully towards substituting, in lieu of erroneous principles, others more solid and more true, because based upon the material alterations, discovered by means of autopsy. We have a proof of this in the subject which is now to engage our attention:

Spontaneous gangrene, which is in Mexico the cause of as many amputations as all the other internal causes of disease united, appears to have chosen this capital for its residence, as ophthalmia has chosen Egypt, the cholera, the East Indies, the pelagra, Lombardy, or the plica, Poland, &c. Mexico, once the Venice of America, is situated in the interior of the country, about eighty leagues from the Gulf of Mexico, and about fifty leagues from the Pacific Ocean. It is built upon a plain at an elevation of more than seven thousand feet above the level of the sea, at the 19th degree of north latitude. The temperature is constantly at about 50 to 60 degrees Fahrenheit; the soil is sterile, abounding in salts of soda (*terrens tequesquetoso*), and at the depth of two feet a brackish water is met with, whilst at about one league distance a thermal sulphurous spring, called *le Penol*, exists. This city offers a vast field for the observing physician, on account of the variety of diseases of the sanguine system which prevails; such as affections of the heart and its annexæ, aneurisms, congestions, abscesses by congestion, membranous irritations, and inflammations, &c. This town, which is fatal to phthisical subjects when the secretions, especially from the cutaneous surface, are so deficient that baths are absolutely necessary for health; where man is more obnoxious than elsewhere to the abuse or free use of alcoholic liquors, here it is that spontaneous gangrene is most frequent and most fatal.

During the space of one year (1837), I saw three or four cases, and heard of others; a few remarks upon some of these will enable the reader to form some idea of their nature and symptoms.

The first case was in the person of Sr. Pascua; after having had both lower extremities amputated by Dr. Villetti, at different periods, and I believe, also, the superior extremities, the patient then entered the hospital, where he died a few months afterwards. Dr. L. Jecker made the autopsy of this man, and preserved the abdominal aorta and iliac arteries, as morbid specimens. As to the other parts of the cadaver, I am not prepared to speak. On laying open longitudinally these arteries, the following peculiarities were presented: on the free surface of the internal tunics of said arteries, at unequal distances, were found a number of superficial ulcers, either round or oval, with smooth borders: from one to four lines in diameter; more numerous near the bifurgators; some were of a white, others, of a pale yellow, color; others resembling aphthæ; others grey and *mammillonated;* others again covered with flocculi, which were easily detached, and resembling in structure, fibrine. The capillary system of the internal coats of these arteries presented no other changes, or any degree of injection.

The second case was a poor man, aged forty-five years, who presented symptoms of marasmus, which usually characterize the last stages of all chronic diseases. He had a gangrenous spot as large as half a dollar on the dorsum of the right foot, analogous to an ordinary eschar, produced by caustic applications. I could not detect the pulsations of the arteria dorsalis pedis. The pulsation of the arteria cruralis, at the point where it emerges from beneath Poupart's ligament, was scarcely perceptible on pressure. In consultation it was decided that amputation would be useless, because the disease had undoubtedly extended already as high as the iliacs. In a short time afterwards, the patient expired.

On examination, after death, the principal arterial trunks of the diseased limb were found completely obstructed; in fact, their calibres were obliterated. The corresponding iliacs presented the same morbid alterations as those which were specified in the first case.

The third case was a man of the higher class, aged thirty-eight years, and whose *embonpoint* precluded all idea of any constitutional affection; he complained of constant pain in the bottom of the left foot, corresponding with the first phalanx of the great toe; at this point the skin was callous and presented no other signs of inflammation than the pain, which was not increased by pressure; he compared the painful sensation to that arising from corns: the temperature of the extremity was normal; the skin on this leg was rather drier than that on the other. The pulsations of the dorsal artery of the foot were visible; and when pressure was made upon it, it was found contracted, tense and isochronous with the other arteries of the body. The crural artery of the same side was similarly affected, though less characteristic. Besides these peculiarities, the organism seemed healthy. About two months posterior to this time, amputation was performed above the knee; the patient recovered, perhaps to submit, at some subsequent period, to another amputation. The limb was examined, and the same pathological changes were observed in the arteries of this as of the preceding limbs.

The fourth was a subject aged thirty-two years, of a robust constitution and a sanguine temperament. This man usually enjoyed good health until about two months before I saw him. At this time, he complained of a constant pain at the sole of the left foot, without being able to account for it. Having given him a careful examination, I found he presented all the symptoms of the third case, except the seat of the callosity, which corresponded with the phalanx of the third toe. Finding the disease of recent origin, and the subject otherwise in good health, I determined to try to arrest the disease by internal medication, rather than amputate; reserving this as the last chance, in case I failed in my first effort to check it. For this purpose, I resorted to general bleeding, mercurial inunction, drastic and saline cathartics, the free use of diluents, full, warm, prolonged baths of two and three hours; hot fomentations to the affected limb, and low diet. The patient bore this active treatment quite well; the objective symptoms gradually disappeared, and at the end of four months, he was able to resume business. I did not, however, dismiss my patient, without advising him to restrict himself to a low and exclusively vegetable diet; to use repeated warm baths, and from time to time to resort to some of the purgative medicines first administered; I also opened an issue below the internal condyle of the femur, on the upper and posterior part of the tibia, which I advised to be kept discharging for life. In addition to this precautionary measure, I suggested the constant use of *gum-elastic* stockings.

Wishing to make some remarks upon the disease in question, let us first examine whether the name it bears is the most appropriate. As to myself, I should answer in the negative; because, in my opinion, the *gangrene* termed *spontaneous*, is but the consequence of another disease—a mere symptom of the last stage of said disease; as a dropsy which supervenes upon chronic disease of thoracic, or abdominal viscera; at all events, this name might only be appropriate in the last stage of the disease; when no means can arrest its progress, and rescue the patient from certain death. If the physician is unable to detect the primitive cause of the affection, he can, at least, by the aid of pathological anatomy, understand its true seat and the nature of the lesion. *

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The autopsy of the first three cases shows that the seat of the lesion is in the internal tunics of the arteries; a lesion, which causes the obliteration of the arterial tubes, and consequently, the gangrene.

Is this affection of the internal coats of the arteries, the cause, or the consequence, of an inflammation? I cannot believe it to be an acute inflammation, such as exists in a case of phlebitis; otherwise, we should have fever and general excitement of the heart and arteries. Besides, supposing it to be an acute inflammation, why does it not spread through the whole arterial system in a short time, instead of extending so slowly, as to require several days for the final development of the gangrene? Why are the diseased points, or ulcers, on the inner surface of the arteries, scattered over this tissue, leaving the spaces between them perfectly normal, instead of involving the whole free surface of the arterial tunic? Can it be called chronic inflammation, or that state of congestion arising from atony of the tissues, either pre-existing in subjects of a lymphatic temperament, or as a consequence of the alteration induced by a previous acute inflammation? I believe neither to be the case. The internal coats of the vessels, examined in the first case, were not at all injected; what then is the essence of the disease—the *causa proxima morbi*?

To come to the point at issue, I must compare this with some other kinds of gangrene; and then speak of the etiology of the disease.

The gangrene consequent upon a high degree of inflammation, is the effect of an excessive action of the capillary system of vessels, combined with a hypersthenic diathesis;—in a word, over action in a part, ends in the death of that part. Such is not the case in the affection under review.

Gangrena senilis, which arises from the obliteration and ossification of the arteries, produced by the diminution of the vital energy, and the prevalence of the inorganic principles, has no other connection with spontaneous gangrene, than the obliteration of the vessels. As to the gangrene, arising from the protracted use of the *secale cornutum*, it would be useful to know what alterations are produced in the arteries in this disease, because such knowledge might shed important light upon our subject; and this, perhaps, would enable us to ascertain that gangrene from the ergot takes place in the same way as that called spontaneous; that in both the same alterations are found, and finally, that different causes may produce similar effects; that is, an affection of the internal tunics of the arteries, to which a name might be given more significant of the disease.

As to the causes of this malady, so common in the city of Mexico, to what are we to attribute it? Shall we ascribe it to the free use of the *pulque*, a drink which is the product of the *agave Americana;* a plant which is extensively cultivated in some parts of Mexico, and which constitutes the principal drink in the Capitol? Such cannot be the cause, else this disease would prevail in other sections of the country, where this drink is generally used. To the constant use, and even abuse of *cayenne pepper?* this cannot be the cause, since this article is freely used as a condiment in all parts of the country, and by all classes of people. To the *tequesquitosa* quality of the soil, which consists essentially of the salts of soda? this is not at all probable, because this kind of soil abounds in many sections and countries where this malady is unknown. To what then shall the disease be ascribed?

Above it has been observed that the temperature in the city of Mexico constantly stands at from fifty to sixty degrees (Fahrenheit), and the functions of the skin are here extremely languid; on which account, the inhabitants are forced to use almost daily, the warm bath, in order to preserve their health; when the physicians find it necessary to order baths much more frequently and much more prolonged than in other parts of the world. Here, the functions of the skin, through which, in a healthy state, those heterogeneous principles should be thrown out of the organism, are more or less checked, or suspended, thus causing those elements now no longer fit for the purposes of nutrition, to be retained in the system, and which may probably be the existing cause of the disease of the arteries. In other words, I believe that the essence of this disease consists in an abnormal nutrition of the internal tunic of the arteries, produced by a *dyscracia*, which proceeds from an imperfection of the functions of the skin, or from any other cause capable of altering the chemico-organic conditions of the fluids; abnormal nutrition, which ends in the complete obliteration of the arteries, and consequently gangrene is the result.

Moreover, I believe that this perversion of nutrition would take place on the internal tunic of the arteries, as *cacoderms* are sometimes developed on the surface of the body; and like these morbid productions, it does not occupy the entire surface of the arterial tunics, but is confined to spots here and there, leaving the intervening space perfectly normal. The first case, to which I have already alluded more than once, demonstrates that if in this affection, the physician confines himself to the amputation, without regard to the cause of the disease, with a view to arrest it by therapeutic means, it will continue to be reproduced, and extend to the arteries in the remaining stump, and finally would reach the heart, but for the fact that it invades arteries distributed to organs so necessary to life, that death results ere it reaches the seat of life.

The primitive cause, so productive of this disease in the city of Mexico, is, in my opinion, the same as that which keeps so low the temperature of the town, and which also gives rise to the various maladies of the sanguine system, particularly the arterial, viz.; the high elevation of the city above the level of the ocean. At such an elevation, the air is greatly rarified—hence the imperfect oxygenation of the blood, from the fact that, at each inspiration, a less quantity of oxygen is taken into the system than under ordinary circumstances.

The atmospheric pressure, at this elevation, is comparatively very light; from which it results that the *lateral* pressure of the fluids upon the vessels must prevail over the longitudinal, and must modify the peripheric functions, or the functions of the free extremities of the capillary system; consequently the secretions must be torpid, and the principles which should be eliminated through the skin and other emunctories, be they excrementitious, or decarbonising, remain in the organism, and alter the *crasis* of the liquids, which give rise to the abnormal nutrition that manifests itself in the internal tunics of the arteries.

Why does this disease attack the arteries and not the veins? Why begin in the lower instead of the upper extremities? Why assail males rather than females? These are questions on which we may speculate *ad infinitum.*

I believe that an affection which might bear some analogy with that which excites spontaneous gangrene, in regard to the efficient cause, would be that species of aneurism which, according to Scarpa, is the result of the slow morbid degeneration of the internal tunic of the arteries; with these differences, however, that the latter interests, or involves the great aorta almost invariably; the former begins near or before the last divisions of the arterial trunks into the capillary system; the one is confined to a particular locality of the artery; the other extends to all the arteries of a limb, and travels from the periphery towards the centre; the one attacks all the coats of the artery, causing their rupture; in the other it is confined to the internal coat exclusively; in other words, the affection which gives rise to this species of aneurism, gradually penetrates through the different coats of the artery; whereas, the other spreads itself, by continuity of tissue, over the surface of the internal coat; the one ends in rupture, the other in an obliteration of the artery; in one, the ligature, when practicable, may rescue the patient from death; in the other it is useless, because the disease will be reproduced above the ligature. The cases of aneurismatic diathesis, of which I have seen two, in the city of Mexico, might, in my opinion, occupy a place between these affections; and might furnish an argument in favor of the analogous origin of the two diseases. In one of the cases with the aneurismatic diathesis, there were six distinct, obvious aneurisms, occupying different parts of the body. Here it was justly deemed useless to operate. Although the patient does not seek advice until the disease has made some progress, and with a view only to be relieved of the constant pain seated in the bottom of the foot, without suspecting the serious nature of the disease; still, there are other symptoms which enable the physician to diagnosticate the affection, such as a callous hardness at the seat of pain; without heat, redness or tumefaction of the integument. The skin, in general, especially that covering the affected limb, is extremely dry, though the temperature is at the healthy standard. But the symptom which I would characterize as pathognomonic, to which the pain directs attention, is furnished by the *arteria dorsalis pedis;* to prove this, I refer to case third. When the gangrene is declared, the pulsations in the diseased limb are only perceptible in the crural artery, and much less then than in the normal state, as has already been mentioned in the third case. The progress of the disease is very slow; sometimes two or three years elapse before gangrene is manifested. The age at which the disease usually sets in is between thirty and fifty years of age.

Having said that I regarded the affection as a lesion of nutrition, the indication which follows is to correct it. To this effect, I employed, as the principal therapeutic agent, *mercury,* in the form of ointment, externally, as this medicine has been employed with success in scrofulous and dermoid affections, and from analogy, in syphilis; besides, mercury eliminates from the system, through the salivary and other organs, the *débris* of the organism. Considering this disease, with the advocates of the contra-stimulus, to be an inflammation of the arteries the use of mercury would meet the indication according to their views; since experience has taught us that this medicine is a powerful antiphlogistic, and such as to produce a salutary effect that could not be often obtained by other similar means; in such as metro-peritonitis puerperalis, and all extensive phlegmonous inflammations threatening gangrene. In mercury, the homœopathists would find the application of their principle—*similibus similia curantur*, although I cannot agree with them in regard to minimum doses, above all, in the treatment of organic diseases, since, in the case treated by me, I employed at least two pounds of the mercurial ointment. I would not be understood to state that this powerful medicine should be exclusively used in the treatment of spontaneous gangrene; on the contrary, there are others, such as iodine and its preparations, which may be used with signal advantage. Be it remembered, however, that although it be a disease slow in its progress, yet it is invariably serious in its consequences; and as such, should be opposed by prompt and efficacious treatment. I do not consider venesection as always indicated; although in particular instances, as in the one already detailed, it may be called for. The object of the warm bath is to stimulate the function of the skin; and, by prolonging the bath, to introduce into the system a certain amount of fluid. By the free use of saline and drastic purgatives, we increased the renal and intestinal secretions; and, by this means, I was enabled to correct the morbid nutrition. It is easy to perceive the motives which led me to adopt precautionary measures with my patient before I dismissed him. To avoid a relapse, and to arrest the further progress of the disease, the patient may be advised to take up his residence in a warm climate, upon the sea coast. How many diseases of a serious nature here, by this means, have been checked or removed. Even in cases of amputation it is necessary to continue the use of such therapeutic means as have been recommended, else the disease will continue to extend, as in the case of poor Pasqua, until death puts a stop to its progress. Experience has shown that after gangrene has developed itself, amputation is almost always useless, because the disease has by this time invaded the iliac arteries; but if, however, this grave operation should be performed, it may be recommended to prevent the union by the first intention, and thereby establish a salutary drain from the diseased limb.

This disease is so dangerous as to require, at least, caution in pronouncing the prognosis, a prognosis which must be modified according to the progress of the affection, which, in general, is unfortunately far advanced; because the patient applies for assistance only after having suffered for a certain period from the disease. Oftentimes he then refuses to submit to an energetic treatment and a severe diet, still less to amputation, unwilling to believe that a bearable pain can be the sign of a serious disease, and the forerunner of an evil which smoulders beneath the surface, sooner or later to develope itself in the form of a frightful gangrene.—*New Orleans Medical Journal.*

Le Conte on Geophagy.—We notice a very excellent article on *Geophagy*, or dirt eating, in the August number of the Southern Medical and Surgical Journal, by our able correspondent, J. Le Conte, M.D., of Savannah. The Essay does great credit to the accomplished and talented author. We copy from it the concluding portion:—

It cannot be doubted, that the great mass of substances, inservient to the nourishment of man, is obtained from the animal and vegetable kingdoms; but there seems to be no sufficient reason for excluding those articles of the mineral world that are necessary for the due constitution of different parts of the body. Most of these inorganic elements enter into the constitution of the *proteinaceous* compounds of animals and vegetables, as well as into other organic aliments, in sufficient quantity to supply the wants of the system. When they are not thus furnished in adequate quantities, it is by no meansu nreasonable to suppose that they will,—when presented in a form suitable for assimilation—be appropriated *directly* from the mineral kingdom. Such a deficiency of the mineral ingredients of the aliments, may be the cause of the prevalence of Geophagism among certain tribes of savages. I do not now speak of the vitiated appetite for inorganic substances, manifested as a symptom of derangement of the function of digestion, but of the habit as it prevails among apparently healthy individuals. All of the edible earths contain more or less *lime*,—an element essential to the proper nourishment of the osseous structures.

The essential constituents of the human body are thirteen—viz: carbon, hydrogen, oxygen, nitrogen, phosphorus, sulphur, iron, chlorine, sodium, calcium, potassium, magnesium, and fluorine; and the same, therefore, must be the elements of our food. Several of them are required in such minute amounts, that considerable time must elapse before their want is manifested by derangement of the animal economy; but it seems certain, that no one of these primary or simple substances can be wanting in the nutriment without the body ultimately feeling the ill effects of its absence. From experiments on the nutrition of a calf, and a cow in calf, M. Boussingault concluded that there is a portion of the mineral substance taken in with the food, which remains definitely fixed, to concur in the growth or in the evolution of the individual. In an adult animal, it is to be presumed, that no such definite fixation of inorganic principles takes place, or that it is much less considerable. Nevertheless, it would be a grave mistake to suppose, that an adult animal could go on for even a short period of time, upon food that contained no mineral matter. Precisely as in the case of organic matter, it appears that a portion of inorganic matter is also fixed in the living frame, where for a time it forms an integral element in the wonderful structure; and a supply of the latter kind is undoubtedly no less necessary, than is the supply of the former description recognized by all the world. (Vide Rural Economy, in its relations with Chemistry, Physics, and Meteorology; or, Chemistry applied to Agriculture. By J. B. Boussingault, Member of the Institute of France, etc. Translated by George Law, Agriculturist: Am. Ed., New York, 1845, p. 410 et seq.) Were there an inadequate quantity of phosphoric acid, of lime, etc., in the aliment, no question but that the body would speedily feel the effects of the deficiency, and that disease and death would eventually put an end to existence. So much, indeed, seems demonstrated by the very interesting experiments of M. Chossat, in which he kept granivorous animals upon a diet rich in azotized principles and in starch, but deficient in *lime*. From previous inquiries, M. Chossat had observed that pigeons even require to add a certain proportion of lime to their ordinary food, the quantity naturally contained in which does not suffice them. Wheat, though it contains a large proportion of phosphate of magnesia, yields very little phosphate of lime; and pigeons fed on this grain, though they do perfectly well at first, and even get fat, begin after a while to fall off. In from two to three months, the birds appeared to suffer from constant thirst; they drank frequently; the fæces became soft and liquid, and the flesh wasted, and in from eight to ten months the creatures died under the effects of a diarrhœa, which M. Chossat attributed to *deficiency of the calcareous element* in the food. And it is neither uninteresting nor unimportant to observe that the same thing occasionally occurs in the human subject during the period when the process of ossification is usually most active. But one of the most remarable features of M. Chossat's experiments was observed in the state of the bones of the pigeons; they became so thin and weak that they broke during the life of the birds with the slightest force. (Chossat, in *Comptes Rendus*, tom. xiv., p. 451, as cited by Boussingault, op. cit., p. 413.) From these instructive experiments M. Boussingault very justly concludes, that "supplies of all the elements of all the parts of the body are indispensable to the maintenance of health, to the continuance of life." (loc. cit.) A pigeon will eat about 463.140 grains of wheat per diem, containing 9.725 grains of ash, in which analysis discovers 4.569 grains of phosphoric acid, and 0.277 of a grain of lime. But this small quantity of lime is incompetent to maintain the bones in their standard condition. (Boussingault, op. cit., p 413.)

The importance of the inorganic principles of food has not been sufficiently recognized:—it is not only indispensable that the allowance of an animal in full growth be adequate to support, and even to add to the soft textures;—it must further contain the elements requisite for the nutrition of the osseous system. While the ashes of wheat contain about 2.85 per cent. of lime, that of maize or Indian corn grown at Bechelbronn, yields, according to the analysis of M. Letellier, but 1.3 per cent. of *lime*, to 50.1 of phosphoric acid, and 17.0 of magnesia. (Vide Drs. Will and Fresenius on the Inorganic Constituents of Plants, in Phil. Mag., 3d Series, vol. xxv., p. 517. 1844.) Very probably the amount of lime contained in maize may vary considerably, according to the character of the soil in which it is grown; but the foregoing analysis seems to indicate, that this grain usually contains *less* of it than wheat. Hence, M. Boussingault remarks that, " in South America, where the animals have it largely, I have observed that they frequently *eat earth*." "The habit," he continues, " which certain tribes of the natives have of eating earth, too, which has been particularly remarked upon by travellers and missionaries as an instance of depravation of taste, presents itself to me in quite another light, since I became acquainted with the composition of the ashes of the ordinary article of diet (maize) in the countries where it occurs." (Op. cit., p. 414.) The calcareous and other salts necessary to nutrition are, however, not derived from the food exclusively; the water that is generally consumed contains a quantity which is by no means to be neglected. Liebig seems to think, that the habit of eating calcareous substances observed among children, arises from an insufficient quantity of lime in their diet:—the validity of which assertion is questioned by Pereira, on the ground that there is no evidence to prove that in these cases the food is deficient in its ordinary proportion of lime. (Vide Pereira, op. cit., *ante*, p. 37.)

In confirmation of the importance of inorganic principles in the food, I will here adduce a remarkable fact which has repeatedly fallen under my own observation. The cows which live on the extensive savannas and pine barrens lying on the North side of the Altamaha river in McIntosh county in this State, subsist upon very coarse species of grasses, which are probably deficient in some of the phosphatic or calcareous ingredients essential to healthy nutrition; for these animals are constantly observed to *chew bones*:—frequently remaining stationary for several hours,—with the head elevated at an angle of forty-five degrees to prevent the saliva from escaping from the mouth,—they will, by constant trituration, gradually reduce the bony mass to a very small size, when it is rejected as an unmanageable morsel. The cattle in this section of the State are usually rather lean; and cows brought from the fertile plantations in the neighborhood,—if allowed to subsist on what they can procure in the savannas and pine-barrens,—in the course of a year or two become equally thin, and ultimately fall into the habit of *eating bones*. I have not been able to ascertain whether these animals indulge in this habit to a *greater extent* when they are in a state of pregnancy and when they are giving *milk*; but it appears reasonable that the increased demand for mineral matters under such conditions of the economy, would call for a proportionate supply. The intelligent instinct which prompts these animals to seek for a diet so extraordinary, must originate in an inadequate supply,—in their impoverished aliment,—of some of the inorganic principles (probably the phosphatic salts) essential to a proper nourishment of the osseous structures. The above mentioned fact confirms the justice of the observation of Prof. J. F. W. Johnson, who recommends upon *theoretical* grounds, that bone-dust, or *bone meal*, be introduced as an article of general food, for growing and pregnant animals, with a view of supplying the large quantity of the phosphates required for increasing the osseous system of the one, and for the healthy evolution of the fœtus in the other. (Op. cit., *ante*, pp. 603 et 605, Part 4.)

Such being the importance of mineral elements in the animal economy, it does not appear either extraordinary or very astonishing, that the dogs, geese, and other animals, which MM. Magendie, Tiedemann and Gmelin fed exclusively on sugar, or gum, or starch and distilled water, should have gradually become extremely emaciated and eventually died of inanition; or that the unfortunate Dr. Stark should have fallen a victim to a system of *exclusiveness* in diet. It is scarcely to be expected that animals could subsist for any length of time, on aliment which did not contain *all* of the constituents of their bodies,—which could not repair the waste of the system. The necessity for *variety in diet* so clearly illustrated by the experiments of MM. Magendie and Burdach, is very probably owing to a deficiency of one or more of the *inorganic principles* in the alimentary substances which were given to the animals. Some articles of food contain an inadequate quantity of some salts, which are supplied by others;—and thus arises the necessity for *variety in diet.* In *milk* nature has furnished a product perfectly adapted to sustain and develope the young animal:—it contains all of the proximate principles necessary for the increase of the soft textures, and, likewise, all of the saline ingredients required for the consolidation of its bones.

Every fresh discovery in Organic Chemistry brings vital phenomena more within the grasp of physical laws, and, in so far, more within the province of exact research. We have yet to learn what *chronic diseases* are produced by restricting individuals to a diet deficient in certain inorganic principles which are indispensable to healthy nutrition. The importance of a good allowance of chloride of sodium in the food, is universally acknowledged; but the influence of the phosphates, of the salts of lime, magnesia, potassa, iron, etc., has not been sufficiently investigated. Certainly it is not an irrational conjecture to suppose, that the Geophagous propensity manifested by certain tribes of savages,—not as a vitiated appetite resulting from a nervous lesion of the function of digestion, but as an uncontrollable *habit,*—may be owing to a deficiency of some of the saline ingredients in their ordinary food which nature prompts them to supply in this remarkable manner. This view derives confirmation from the fact, that an indulgence of the appetite *does not* always produce disease. Might not a due admixture of *bone-meal* with maize and other kinds of aliment, afford a cheap, efficacious, and *palatable* mode of furnishing the saline materials required in the reparation of the osseous structures? Might not such a plan contribute greatly towards the eradication of the *Cachexia Africana* from the Southern and Western States?

Man can never devise a system of dietetics which will embrace but *one single alimentary principle,* for the obvious reason that his body is composed of a number of such elements. It is highly amusing to notice the great attention with which some persons regard the veriest trifles in diet, and the hopes which they entertain of the advantages to be derived from strict constancy in some particular style of self-management. Some, like Sanctorius, measure with scrupulous accuracy the prescribed quantity of their ingesta,—while others, like Boileau, religiously abstain from sitting near the fire, lest peradventure it should dry up their radical moisture. Notwithstanding all this, man is not made to last for ever:—it is scarcely reasonable to imagine that he will ever, in the language of Dr. Fletcher, "instead of sitting down, as at present, to his pound and a half of mutton chop and pot of porter, swallow for his dinner a five grain pill composed of equal parts of ovine and cerevisne, or some such matters of which science has yet to be delivered;"—but rather, that all attempts to work miracles on himself, and render him unsusceptible of disease, must be for ever frustrated, and that he must always continue to exist, the same "poor, bare, forked animal" that he was originally created.

Savannah, June 25th, 1845.

Yellow Fever and Quarantine.—Extract from the proceedings of the Physico-Medical Society of New Orleans.

At a regular meeting of the Physico-Medical Society of New Orleans, held Saturday evening, 15th February, 1845, the article read by Dr. Hort, on the subject of Quarantine Laws, was, on motion of Dr. Farrell, referred to a committee of five, to report at a subsequent meeting. The President appointed on said committee, Drs. Farrell, Hort, Jones, Anson and Dowler.

At the regular meeting of the same Society, Saturday evening, May 10th, the following report was submitted by the committee and unanimously adopted:

The committee appointed to report on the expediency of Quarantine Laws as a means of preventing the importation of yellow fever into this city, beg leave to state, that in considering the subject, they have felt the responsibility which appertains to questions affecting the health and prosperity of the city, and the lives of the inhabitants.

That while they admire and appreciate the ability with which several eminent Medical men have advocated the contagiousness of yellow fever, its importation from the Eastern into the Western hemisphere, and the consequent necessity of the establishment of Quarantine laws, they nevertheless consider that the weight of testimony and of facts is immeasurably on the other side of the question; and which opinion is further confirmed by their own experience and observation.

That they can see no reason why the same local and general causes, under the same circumstances, or nearly so, should not produce similar results in the production of malignant fevers, in both hemispheres of the world.

That where sufficient causes exist to engender disease in one place, it is useless to speculate on the question of its importation from some other place.

That in viewing the history of the yellow fever one hundred and fifty years past, the committee have come to the conclusion that it was developed, as were many other malignant diseases, before unknown, by the march of civilisation urged forward by commercial enterprise.

That in this way, in the course of time, yellow fever became developed in both hemispheres, confined within nearly the same parallels of latitude, and forming distinct yellow fever regions, in addition to the regions of cholera and plague.

That in the gradual progress of civilisation, measures have been adopted, and changes of climate have taken place, which have greatly diminished the yellow fever region in this hemisphere; and that its northern limit is now twelve degrees south of what it was a hundred years ago, in the time of Lind.

That this great result has been accomplished, not by quarantine laws, but by other judicious police regulations, together with great changes in the local features of countries; and those atmospherical changes, over which man has no control.

That quarantine laws, even should their existence be deemed necessary, are inadequate to the protection of a seaport of easy access; as Dr. Rush says, that a *still more rigid* quarantine called for in 1797, in Philadelphia, failed to accomplish the purpose desired. In 1805, the same fact is affirmed by Dr. Rogers, health officer at New York. In 1822, if imported, the system again failed at New York (and in this city it signally failed in 1820 or '21, when a rigid quarantine was established at the English turn).

The committee are therefore of opinion, that quarantine laws are unnecessary and inexpedient for the protection of the city.

That even if they did prevent the importation of yellow fever (admitting for one moment, for argument sake, that the disease might be imported), they could not at any rate prevent the existence of diseases equally fatal; such as the congestive fever, and the malignant types of intermitting and remitting fevers.

That facts seem clearly to prove, that the yellow fever has decreased in malignity, in a ratio with the improvements of the city—as the draining of the land in the rear of the city; the paving of the streets; the filling up of empty lots; the use of asphaltum; permitting the river water to run through the streets, when the river is high; and the removal of filth and offal from the streets.

That instead of quarantine laws, the measures last alluded to should be steadily persevered in, and carried by an enlightened policy to a still greater extent; which would not only have a tendency to avert yellow fever, but all other malignant diseases, peculiar to our climate and position, at a particular season of the year.

The committee, in conclusion, sum up this report by declaring:

That they believe the yellow fever to be a disease of local or domestic origin, and that it is not an imported disease.

That it is never contagious.

That it may be made to yield to judicious police regulations.

That quarantine laws are very expensive to the community, and that they are not only unnecessary and inexpedient, but worse than useless. They therefore recommend:

1. That the commissioners in each ward be requested to look into back yards

and lots; and be authorized to cause everything offensive to be promptly removed.

2. That the different Councils of the city should exert themselves to the utmost of their official capacity, to have the surface of the earth covered over with something, to prevent the exhalations from the alluvial soil, on which the city is built; either round or paving stones, or bricks, or shells and sand, or asphaltum.

3. That the owners should be compelled by law to fill up all low swampy lots within the limits of the city.

4. That all offal deposited in the streets should be promptly removed; and if possible before the heat of the day.

5. That whenever the river is high, the water should be allowed to run through the streets day and night; and that when it is too low, the waterworks, or if necessary, additional works established for the purpose, should be brought into play.

6. That above all, particular attention should be paid by the city authorities to the alluvial bank, particularly under the wharves of the Second Municipality, which is annually uncovered as the river falls, exposing an immense surface of fresh deposit, covered with every kind of decaying vegetable and animal matter, which daily accumulates, either carried there by eddy currents of the river, or thrown in by the inhabitants.

7. The committee deem this last consideration to be of the highest importance, as there is every reason to believe that the bank of the river under the wharves is more productive of disease in the summer, than all other causes in the city combined.

8. That instead of depositing the filth and offal collected in the streets by the scavengers, in empty lots or in the rear of the city, it is recommended to the city authorities to have all such filth and offal thrown into the current of the river.

They would also observe, that the measures just recommended would not be attended with one-fourth of the expense of a quarantine establishment properly conducted; while, should they be pushed forward with zeal and energy, the time might, and no doubt would, ere long, arrive, when New Orleans would no longer be within the yellow fever region; and consequently exempt, not only from that pestilence, but from all the other fatal diseases of the summer and fall, peculiar to our climate and to our position. This accomplished—what would there remain to retard the growth and prosperity of our city? She would speedily accomplish her high destiny, and in less than a quarter of a century become one of the most wealthy, prosperous, and populous cities in the Western Hemisphere.

J. FARRELL, Chairman.

On motion of Dr. Graham, Drs. Farrell and Hort were appointed a committee to have it printed.

It was further resolved, that a copy of the same be presented to the Councils of the city.

THOS. HUNT, M.D., Pres.

W. G. G. Wilson, M.D., Sec'y.

Case of Congenital Malformation of the Heart. By John Bell, M.D.—W. A—, the second child of healthy parents, was born 30th of August, 1837. For the first two years of his life he did not manifest any peculiarity of appearance or disorder of function beyond occasional attacks of bronchitis, during which his face assumed a hue seen only in the most violent forms of bronchial congestion. From within eight months after birth until he had entered his fourth year I lost sight of this child.

After again resuming my professional intercourse with the family, my attention was directed to W.'s appearance and sufferings. His face and extremities were then of a dark blue, as were also his lips and tongue; the eyes prominent and shining, and the conjunctiva injected and of a purplish hue; nostrils large and dilated. The sternum and anterior part of the thorax were unduly prominent.

The ends of the fingers and toes are broad, swelled and pulpy. Respiration hurried and panting, and the breath emitted during speech with a kind of hissing sound; pulse frequent and rather full, but easily compressed. Impulse and the bellows sound, well marked over the sternum. Dulness on percussion was of limited extent. The jugulars are much distended. The temperature of the skin, especially at the extremities, is below the natural standard. The appetite was generally good, and the discharges from the bowels and bladder were in normal quantity and regularity.

This boy is easily alarmed, and in the early part of the night often jumps up in affright, as his mother relates; but we may rather suppose that his restlessness proceeds from difficult breathing and an occasional sense of suffocation at this time. His disposition is cheerful, and, unless when suffering from a paroxysm of bronchial congestion, he is mild and easily pleased. He runs about and amuses himself in the same sports as other children of his age. He lies indifferently on either side. It is not necessary to give the particulars of the repeated attacks of pulmonary oppression and congestion to which this poor little fellow was subjected at irregular intervals, from the time when I began this description of his case, in his fourth year, up to that of his death in June, 1845, or two months short of his being eight years old. These were generally induced by the usual causes of catarrh, and sometimes by indigestion. Within the last two years these attacks became more violent, and left him weaker and more irritable and nervous, with less inclination for exercise or attention to his school lessons. The prominence of the sternum and left side of the chest went on increasing; the distension of the jugulars and the pulsations were still more perceptible. The sounds in common were not strong, although those of regurgitation were quite distinct. During a paroxysm, there was, however, a loud bellows and rasping sound, with another less evident and comparable to a subdued gurgling, or churning, over the sternum. The pulse all the while was frequent, but without force. Directly applied over the region of the left ventricle, or to the stethoscope on this part, the ear received the impression of weak sound and movement.

At two different periods, together with great precordial and pulmonary oppression, dyspnœa, &c., there was tympanitis, obstinate constipation, and anasarca, against which all the usual diuretics and means of indirect reduction were utterly powerless. Recourse, however, to venesection in quantity varying from two to four ounces, and sometimes cupping, once over the loins, when there was a suspension of the urinary discharge, and at other times, on the chest, exerted an immediate and beneficially controlling influence over the disease, the restoration from which, as far as regards the symptoms enumerated, was as sudden, as it at the time was violent and alarming. The common purgatives, diuretics, and expectorants, would then manifest their customary good effects. Relief was sometimes procured from the wine of colchicum with carbonate of potash, and when the oppression was great, with carbonate of ammonia. Little or no benefit was derived from digitalis. In the two last attacks, the blood was almost entirely destitute of serum, there being not a table-spoonful of the latter to four ounces of the former.

On recovering from the attacks of acute disease, and especially when active treatment had been employed, the skin lost in a great measure its blueness, and approached nearly to its natural color: but the characteristic expression of the eyes was still preserved. The appetite was generally good, and the craving for various articles, some of them of an indigestible nature, inconveniently great.

The last and longest attack was during the last few days of March and the first three weeks in April of the present year. At this time the extreme oppression and dyspnœa and other evidences of excessive labor of the heart, coupled with the evidences of malformation of this organ, and the tympanitis and anasarca, forbade the hope of recovery, and death was looked for from day to day. Contrary, however, to an apparently evident prognosis, the little patient rallied under the effect of two venesections; the anasarca disappeared, and his feet and legs, at one time enormously swelled, recovered their former size and appearance, and all his functions were restored to their usual condition. He was able to go about the house, and seemed to be, with the exception of weakness, as well as his peculiar state would allow.

On the — of June he was taken out to ride, and he enjoyed greatly the change. On his return, however, he complained of oppression and difficulty of breathing, which rapidly increased, and in a few hours, and before he could be visited by a physician, he was dead.

Unable myself, owing to an accident which confined me to the house, to visit the subject of this case at the time of his death, or to make a *post-mortem* examination, I was fortunate enough to procure the kind offices, on this occasion, of my friend Dr. J. K. Mitchell, by whom, with the assistance of Dr. J. M. Allen, the dissection was made. From Dr. Allen I derive the following notes of the autopsy :—

"Unusual engorgement of the vessels, both superficial and deep seated, with uncoagulated blood. Each plural cavity contained five or six ounces of serous fluid—the pericardium, a small quantity. Heart very much enlarged, depending entirely on hypertrophy of right side,—the parietes of right ventricle being nearly twice its normal thickness. Nothing peculiar in the appearance of the right auricle. General appearance of left side of the heart natural, excepting its atrophied condition. An opening about half an inch in diameter at the upper part of ventricular septum, common to the two ventricles and the aorta. Ascending aorta nearly twice its natural size, semilunar valves at its mouth correspondingly large. Ductus arteriosus open, and sufficiently large to admit a goose quill. Pulmonary artery of its natural size at the entrance of the arterial duct, but gradually tapering toward the right ventricle, with which it communicated *directly*, by an opening so small as scarcely to admit the introduction of an ordinary probe.. The foramen ovale not entirely closed, but evidently not sufficiently open to allow of any deleterious admixture of venous and arterial blood.

"The only direct communication between the right ventricle and pulmonary artery was so small as to escape observation until the artery had been opened and carefully explored. Did this opening at the mouth of the pulmonary artery, during life, transmit blood to or from the right ventricle? The form of the artery and the absence of any valvular arrangement at its mouth, would, it appears to me, favor the former idea."—*Bulletin of Medical Science*, *August*, 1845.

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Occupation in Insanity.—At the recent anniversary of the Union Discipline Society in Boston, the following anecdote was related of a boy who was sent to the Brattleboro' Asylum, in a state of derangement. He told the physician that he wanted work; he couldn't live without it. The doctor asked him what he could do? He could print—but they had no means of printing. "Well," he said "the doctor could get work for him at the presses in the village." The doctor applied, but the printer said the boy would "knock the type all into *pi*." The doctor told the boy the result of his application. "Well," said he, "I should do no such thing; but doctor, you can buy a press; it will cost but little." The doctor made the experiment, bought the press and paper, and enlisted the insane to contribute, edited the "Monthly Asylum Journal," and sent it abroad. The boy printed it, improved, and has entirely recovered,—and in the last Journal returned his thanks to the community for this means of restoration.—*N. Y. Express.*

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Art. XXII.—Elements of Materia Medica and Therapeutics. By John P. Harrison, M.D., Professor of Materia Medica and Therapeutics in the Medical College of Ohio. Vol. I. Philadelphia: T. Cowperthwait & Co. Cincinnati: Desilver & Burr. 1845. 8vo., pp. 465, ... 402

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TO READERS AND CORRESPONDENTS.

The Editor craves the indulgence of his readers for any typographical error, &c., which may be found in the present number of the Journal, as it has passed through the press during his absence from the city. The proceedings of the New York Medical and Surgical Society are necessarily postponed to our January number; also reports from the Surgeon-General of the United States Army, and a variety of communications on different subjects now on hand. We return our grateful thanks to our numerous and valuable contributors, and respectfully invite them to continue to favor us with their assistance. It is expected that, in the course of a short time, all communications inserted in this periodical will be paid for at the usual rates. May we not request the present subscribers to use their influence in extending the circulation of the Journal?

The following works have been received since our last:—

Half-Yearly Abstract of the Medical Sciences; being a Practical and Analytical Digest of the contents of the British and Continental Medical Works published in the preceding six months: together with a series of Critical Reports on the progress of Medicine and the Collateral Sciences during the same period. Edited by W. H. Ranking, M.D., Physician to the Suffolk General Hospital. Re-published by J. & H. G. Langley, New York. 1845.

The Homœopathic Examiner. By Drs. Gray and Hempel. Vol. IV. No. I. New Series, vol. i., August, 1845. Pp. 86.

Thoughts on the Connection of Life, Mind and Matter, in respect to Education. By J. P. Bachelder, M D., Utica. 8vo., pp. 84.

A Descriptive, Historical and Therapeutical Analysis of the Avon Sulphur Springs, Livingston county, New York. By Samuel Salisbury, M.D., Rochester. 12mo., pp. 95.

The Anatomy and Diseases of the Breast; with numerous plates. By Sir Astley Cooper, Bart., F.R S. To which are added his various surgical papers, now first published in a collected form. Philadelphia: Lea & Blanchard. 1845. Large 8vo., pp. 130, 188. (From the Publishers.)

The Elements of Morality, including Polity. By William Whewell, D.D., author of the History of the Inductive Sciences. In two vols. New York: Harper & Brothers. 12mo., pp. 401, 424. (From the Publishers.)

Elements of the Materia Medica and Therapeutics. By John P. Harrison, M.D., Professor of Materia Medica and Therapeutics in the Medical College of Ohio. One vol., 8vo., pp. 105. (From the Publishers.)

A Practical Treatise on the Diseases of Children. By James Stewart, M.D., M.A. Third Edition, carefully revised and altered. New York, 1845. 8vo., pp. 544. (From the Publishers.)

The American Quarterly Journal of Agriculture and Science. Conducted by Dr. E. Emmons & A. J. Prime. Vol. II., No. 1, July, August and September. (From the Publishers, in exchange.)

The Domestic Management of the Sick Room, necessary, in aid of medical treatment, for the Cure of Diseases. By Anthony Todd Thompson, M.D. First American from the Second London Edition. Revised, with additions, by R. E. Griffith, M.D., &c. Philadelphia: Lea & Blanchard. 1845. 12mo., pp. 353.

The following Medical Journals have been received in Exchange:—
The British and Foreign Medical Review.
The London Medical Times.
The Dublin Medical Press.
The London and Edinburgh Monthly Journal of Medical Science.
The Provincial Medical Journal.
The London Medical Gazette.
The American Journal of the Medical Sciences.
The Illinois Medical and Surgical Journal.
The New Orleans Medical Journal.
The Boston Medical and Surgical Journal.
The Western Journal of Medicine and Surgery.
The St. Louis Medical and Surgical Journal.
The Medical News.
The Medical Examiner.
The Bulletin of Medical Science.
The Southern Medical and Surgical Journal.
The Montreal Medical Gazette.
Silliman's Journal of the Arts and Sciences.
The American Journal and Library of Dental Science.
The American Journal of Insanity.

We regret that Dr. Tellkampf's Analysis of Dr. Oppenheim's *Zeitschrift für die gesammte Medicin, etc.*, came too late for the present number;—it will appear in our next. We invite the attention of our readers to the communication of Professor Mott, under the head of American Intelligence. A lucid report on the operations of the Lower Jaw, by Dr. D. L. Rogers, may be found in the American Journal of Medical Science, Vol. iv., p. 533. We have received from this gentleman an able communication on the subject, which we hope to be able to publish hereafter. We have received a large number of medical works, which will be acknowledged, and most of them noticed in future numbers. We regret to have to omit till our next Dr. Shipman's article on Epidemic Erysipelas, and a second notice of Dr. Metcalfe on Caloric, which are in type.

☞ All letters in regard to the *business* department of the Journal, and all remittances of money, should be addressed *exclusively* to the Publishers, J. & H. G. Langley; but books for Review, and Communications designed for publication, should be directed, *free of expense*, to the Editor of the New York Journal of Medicine, care of J. & H. G. Langley, New York. Persons at a distance, may direct parcels paid as above, under care of Barrington and Haswell, Philadelphia; W. D. Ticknor & Co., Boston; and Wiley and Putnam, London.

ERRATA.

Dr. Fountain would respectfully beg to correct the following errors in his article on *Phlegmasia dolens*, in the last number of the Journal:—

1st. On page 154, for "Dr. Davis, in his work on diseases of females," please read "Dr. Dewes."

2d. On page 159, I observed of albumen, that it never coagulates at a temperature below 140°; "hence it never coagulates in the limb." By this, I meant to be understood that it never takes on that degree of coagulation or consistence which 140° of heat would produce, so as to render it insoluble in serum, its natural solvent. In all cases of intense phlegmasia dolens it is thickened or inferiorly coagulated, from its being concentrated by a destitution of serum, or the principle which holds it in solution.

3d. On page 163, in the case of Mrs. D., for "two powders of cal. and op.," please read "two powders of camph. and opium."

4th. The last paragraph on page 165 was intended to follow the first case, that of Mrs. D.

[We respectfully request our contributors to write as legibly as possible, else typographical errors will unavoidably occur in passing so rapidly through the press.]

THE NEW YORK

JOURNAL OF MEDICINE.

FOR NOVEMBER, 1845.

PART FIRST.

Original Communications.

Art. I.—*Further Observations on some of the more Obscure and Remote Effects of Syphilis.* By John Watson, M. D., Surgeon to the New York Hospital.

In a short memoir published in the first number of this Journal, July 1st, 1843, and read before the New York Medical and Surgical Society, on the preceding January, I have attempted to show that the venereal disease in its progress through the system, may extend to several organs which are usually supposed to be exempt from its immediate influence. I have shown that this disease may affect the brain and its meninges, the œsophagus, the bronchial tubes, and the testes; and that it may simulate other diseases, as pulmonary phthisis, and diseases of the digestive organs.

In the present article, my main object is to offer a few additional facts in confirmation of the opinions advanced in the memoir above mentioned; and to show that other organs than those of which I have already spoken, may also be involved. With some further observations on the disease as it affects the brain and testicle, I shall attempt to show that it may extend to the liver; that among the cervical ganglia, it may simulate strumous adenitis; that in the lower extremities, it may simulate elephantiasis; and that there is reason to suppose it may occasionally involve the rectum, and the prostate gland. I have also to offer some remarks on the rarity of secondary syphilis after sloughy primary sores; on the frequent and early occurrence of superficial necrosis, in connection with nodes; on the coexistence of syphilis with other constitutional diseases; and on mercurial cachexia, as liable to be mistaken for the remote effects of syphilis.

Seeing that the extension of the venereal disease to the viscera is by no means rare, it is somewhat remarkable that pathological investigation has hitherto furnished so little on the subject. Modern practitioners seem almost to have forgotten, and some of them have actually denied, that syphilis can ever extend to the viscera. "Some structures," says

Sir Astley Cooper, " seem incapable of being affected by this poison, as the abdominal viscera, thoracic viscera, and the brain; for they remain free from specific derangement even in fatal cases of secondary syphilis."—(On the Testis, 2d edit., Lond., p. 166.)

Some of the earlier writers on this disease, however, were by no means so much disposed to deny the possibility of its extension to internal organs. And after making all necessary allowance for the state of pathological anatomy in their day, it would still be unjust towards them to assert that the records which they have left us are unworthy of credit. Severinus, besides relating some observations of his own, refers to others reported in the writings of Alexander Benedictus, Fernelius, Jubertus, Con. Tigurinus, Tomitianus, and Nicholas Massa, to prove that syphilis may extend to every organ in the body.—(De Recondita Abscessuum Naturâ, 4to. Francof., 1643, p. 278.) But in the present investigation, we shall not have to dwell on authorities, either modern or ancient. The book of nature has been open before us; and whether we have interpreted its pages correctly or not, is for others to determine. It is sufficient for our present purpose to know that we speak of what we have seen, and that the points in the history of syphilis to which we are about to call attention, are not without a practical bearing.

I. *Syphilitic Affections of the Brain.*

Since the appearance of my first memoir I have met with several instances, and others have been reported to me by my friends, in which disease of the brain appeared to be depending on a venereal taint of the system. The following is the only instance in which I have had an opportunity of making any additional observations by post mortem inspection of the encephalon.

Case First.—*Necrosis of the Tibia, Syphilitic Ozœna, Coma, Convulsions, and Death.—Small granular tumors in the substance of the brain, Meningitis, and diseased condition of the Cerebral Arteries.*

William Nimmer, seaman, a native of Vermont, aged 55, was admitted into the Hospital on the 3d of December, 1844, with necrosis of the left tibia, of many years' duration, and caused, as the patient presumed, by a local injury. Some two years prior to the occurrence of this affection, he had an attack of syphilis; and in connection with the disease of the tibia, he had long labored under a troublesome ozœna attended with a discharge of thick coriaceous scales from the nose, occasional bleeding, and severe headache, mostly confined to the region of the frontal sinuses. He had also had cutaneous eruptions.

About two weeks after admission, he was observed for the first time, to be affected with twitching of the muscles during sleep. The spasms gradually increased in force and extent until they assumed a tetanic, and at length an epileptic character. They continued to recur several times a day, and with increasing violence, up to the period of his death, which took place on the 4th of January. For a day or two before death, he lay, except when convulsed, in a state of profound lethargy. The treatment adopted during the progress of the case, had little or no influence upon it, and is therefore omitted.

The scalp was found somewhat injected with blood. The arachnoid membrane in the neighborhood of the vertex was thickened and opaque, and glued to the dura mater by an effusion of coagulable lymph. The sub-arachnoid tissue, over the surface of the hemispheres, was infiltrated with serum. About eight ounces of this fluid were removed from the base of the brain, and upper part of the vertebral canal. In the left corpus striatum, projecting slightly from its surface on the floor of the lateral ventricle, there was a small tumor, about the size of a pea, nearly as firm as cartilage, but breaking by pressure into a granular mass; it was of a reddish or yellowish grey color, and amorphous. A similar tumor, but smaller, was detected in the left thalamus. The cerebral substance around both of these bodies appeared to be healthy. The coats of all the arteries of the brain, from the vertebral to the anterior cerebral, were studded with minute buffy yellowish spots, similar to such as usually precede ossification of the arteries. These spots were opaque, and so thick as to render the inner surface of all these vessels somewhat rough and irregular to the feel. A few spots of ossification existed in the coats of the larger of these vessels.

The most peculiar feature of the foregoing case is to be observed in the two small tumors. They presented none of the ordinary characters of scrofulous tubercles, as observed in the brain; they were evidently not organized. They probably correspond with what M. Ricord alludes to as the "syphilitic tubercle of the brain." The appearances here presented differed materially from those described in connection with syphilitic affections of the brain in my former paper. In the case first described, the disease had committed much greater ravages, and the tumor within the brain was of great magnitude. Yet in color and texture, the morbid deposit in both instances was closely allied to the effusion occasionally found, in connection with nodes, between the periosteum and the bone.

I may here remark, that in drawing up my first observations on syphilitic affections of the brain, I was unaware that others had already alluded to this obscure form of secondary venereal. Before publishing them, however, I met with M. Ricord's allusion to what he calls the syphilitic tubercle of the brain. More recently I have met, in the London Medical Gazette, for May 27th, 1842, with some observations by Dr. George Budd, of King's College, in which he attempts to trace a connection between syphilis and apoplexy, but without having met with any fatal cases. Mr. Inman, in the same journal, for July 21st, 1843, has reported a few similar observations, and others have been referred to since, in the British and Foreign Medical Review, for July, 1845.

II.—*Syphilitic Affections of the Liver and Testicle.*

The following case is the only one in which I have ever had reason to suspect that the liver was implicated in the secondary contamination of syphilis. The yellowish deposits discovered after death were identical with what has been spoken of by recent writers, as the yellow tubercle of the testis. But, in this instance, these deposits existed in the liver as well as in the testicle.

CASE SECOND.—*Syphilitic Eruptions relieved; Pleuro-pneumonia, fatal; Yellowish deposits in the liver, and in the right testicle; Chronic Peritonitis.*

Mr. —— an Englishman, of dissolute habits, about thirty-two years old, was admitted into the Hospital in the early part of last spring, on account of secondary syphilis, in the form of eruptions and chronic enlargement of the right testicle. He had been an invalid long before his admission. He had been several times treated for syphilis in England; and more than once, salivated. Under a mild alterative course, continued about six weeks, his eruptions disappeared, the size of testicle diminished, and at the end of two months he left the hospital, apparently in good health. He returned, however, in a few days, laboring under an acute attack of pleuro-pneumonia; and in about a week after his second admission he expired. I had not charge of the patient. The foregoing particulars were communicated to me by the house-surgeon. On the 9th of May, the day after his death, I assisted in examining the body. Evidences of recent inflammation were found in the thoracic viscera. But the point of most interest was the liver. This organ was studded with about a dozen tumors, which lay imbedded in its substance immediately beneath the peritoneum. They were mostly spherical, some of them as large as nutmegs, but most of them much smaller. They were of a yellowish buff color, of a caseous consistence, without organization, and apparently composed of flakes of coagulable lymph that had undergone some change after being deposited. The substance of the liver was paler than usual, but of proper consistence. The peritoneum investing it, especially in the neighborhood of these deposits, was rough, and coated with patches of false membrane, the result of chronic inflammation.

The lower portion of the epididymus of the right testicle contained an insulated mass of precisely the same character as the morbid deposits in the liver. On splitting the testicle longitudinally, I found the tubuli seminiferi crowded sideways, and somewhat pale and atrophied by the pressure of a large mass of this same deposit, which was here of an irregular shape, broadest in front, and apparently connected with the fibrous envelope of the testicle, and extending thence backward in the direction of the corpus highmorianum. The deposits in the liver had each a delicate investing membrane; that in the epididymus was globular and also covered with a sort of capsule; but the deposit in the substance of the testicle lay in contact with the tubuli seminiferi, which it had much displaced. The spermatic cord, and all the abdominal viscera except the liver, appeared to be perfectly healthy. There were no tubercles in the lungs, nor could the deposits in the liver have been readily mistaken for ordinary scrofulous, much less for carcinomatous tumors.

Although most authors who have recently treated on syphilis, not only admit the existence of a syphilitic affection of the testicle, but also describe the symptoms and external appearances by which it is characterized, yet little or nothing is said by any of them as to the appearances presented on dissection. Sir Astley Cooper, we are told, has never had an opportunity of dissecting a testicle thus affected, nor has Mr. Curling. "Sir Benjamin Brodie mentions one instance in which he examined the venereal testicle, and found the morbid appearances to correspond with those observed in chronic inflammation."—(Curling on the Testis, Philad. edit., p. 348.) In my former article I have shown that the fibrous envelope of the testicle is the part most apt to suffer in this disease. The foregoing case still farther confirms this remark, yet shows that other parts may also suffer.*

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* My first remarks on this subject were published prior to the appearance of Mr. Curling's valuable monograph on the Diseases of the Testicle. They appear, however, to have escaped the notice of his American editor.

III.—*Syphilitic Adenitis, simulating Scrofulous Enlargement of the Cervical Ganglia.*

It has often been remarked that this disease, when subsiding, and in some instances where it has been inherited, or modified by treatment, is apt to assume a variety of obscure forms; which, to unravel, require all the ability of the most cautious and experienced. Under these circumstances, there is no disease with which syphilis is more frequently confounded than scrofula. Again, in its advancement through the system, it may excite into open action a pre-existing strumous diathesis; and the two effects may then appear progressing simultaneously. The enlargement of the cervical ganglia now under consideration, as connected with syphilis, is usually looked upon as a concomitant strumous affection; but I have witnessed it too frequently, and under too many circumstances as to previous diathesis, to attribute it in all cases to scrofula. Hypertrophy of the lymphatic glands of the neck, developed in the progress of syphilis, is never among the latest manifestations of the disease; but is always among those most difficult to overcome. In general there is but little tendency to softening or to suppuration; but some of the glands most compressed and irritated by the growth of those surrounding them, may become disorganized, or excite suppuration in the surrounding cellular tissues, and ulceration of the integuments. I know of no external characteristics, independent of the general history of the case, by which this form of disease may be distinguished from simple struma. It sometimes gives rise to tumors so large and deep as to interfere with respiration. In one instance, which occurred in a negro with hypertrophy of the leg, complicated with secondary ulcers on the shin, I remember to have seen these tumors surround the whole neck like a collar; and within a few weeks from the first appearance, acquire so great a size as to cause suffocation, and finally death, by pressure upon the larynx. Iodine has but little influence upon them. Mercury, especially in the form of the perchloride, when it can be borne, will frequently disperse them.

IV.—*Syphilitic Hypertrophy of the Lower Extremities simulating Elephantiasis.*

Within the last eighteen months I have had charge of two cases of enormous hypertrophy of the lower extremities, accompanied with irregular nodulous growths, like the tumors in Molluscum, and connected with secondary ulcers. To an earlier case of the same sort I have alluded in the preceding paragraph. The two recent cases yielded readily to treatment. I shall give a summary account of both of them.

Case Third.—A negro, aged forty-two, a native of New Jersey, who was admitted into the hospital in October, 1843, and became a patient of mine on the first of December following. Some years before admission he had had primary syphilis, since which, at different times, he has had secondary symptoms; among the rest, secondary ulcers on his lower extremities. I found his right leg more than twice as large as natural, thicker even than the upper part of the thigh, and so much indurated as to be almost impressible by the finger. This state of his limb had existed several months, and had supervened upon an old ulcer, still open, just above the outer ankle. Surrounding this ulcer, and studding the leg in other parts, were a vast number of irregular sessile tuberose swellings, some of them as large as pigeons' eggs, but most of them much smaller, and all appearing to consist of hypertrophied integument.

The patient was put upon the internal use of perchloride of mercury in doses of the eighth of a grain three times a day, aided by syrup of sarsaparilla. He was directed to keep the limb elevated, and to dress the ulcer with lotio nigra. In four or five weeks, under this course, the limb gradually diminished in size, the ulcer healed, and the tumors disappeared. He was discharged cured early in January.

Case Fourth.—Mary C——, widow, aged 39, a native of New Jersey, was admitted on the 28th of May, 1844, with both legs enormously hypertrophied, indurated, and nodulated, as in the foregoing case. She had, many years ago, suffered from primary syphilis, and had undergone an alterative course, which at the time appeared to have cured her. After six or seven years, a secondary eruption appeared about her arms and shoulders, and degenerated into indolent ulcers, which remained open about six months. These in turn were followed by similar eruptions, succeeded by similar ulcers, on the lower extremities, and finally by hypertrophy of both limbs. These latter symptoms had continued to trouble her more or less for the last two years. The integuments were of a deep purplish color, almost black, extremely hard, and studded with tuberose projections, not quite so large as in the case above described. Several small and indolent ulcers existed on each leg. The largest of these on the calf of the left leg was about an inch in diameter and quite deep.

In taking charge of the patient on the 1st of June, I put her on the same internal treatment. The limbs were kept elevated, the sores were dressed with a weak solution of chloride of soda, and the patient wore over each leg an envelope of oiled silk, and a roller. Under this course the disease soon yielded. The limbs diminished to their natural size, or nearly so, and the patient was discharged cured on the 13th of August.

V.—*Other Disorders less clearly attributable to Secondary Syphilis.*

1*st. Of the Rectum.*—I have a drawing, taken by Dr. Wotherspoon three years or more ago, from the nates of a little French cabin boy, then under my care, who had been abused by his shipmates, and who had projecting from within the rectum, and adhering around the fundament, an immense mass of syphilitic vegetations, as rough and as ragged as the wattles of a turkey-cock, and much of the same size and color. These, however, did not appear to depend on any constitutional vitiation.

Among the more obscure forms of secondary disease, I might, perhaps, range stricture of the rectum as the probable result of a cicatrix from the healing of a secondary ulcer. But the facts of the case bearing on this point, were not sufficiently clear to warrant me in adducing it as positively the result of the venereal disease, without further confirmation.

2*d. Of the Prostate Gland.*—The symptoms of the following case (the history of which has been but imperfectly taken) present too many analogies with those of secondary syphilis, and particularly with some of the cases which I have already reported, to be here omitted. Looking upon it as an instance in which the venereal disease has excited into action a pre-existing tuberculous diathesis, it presents many interesting features; not the least of which is the total destruction of the prostate gland.

Case Fifth.—*Small chronic abscesses on the legs, resulting in indolent ulcers; periosteal inflammation and diffuse suppuration over the shaft of the tibia; Inflammation, hypertrophy, and partial perforation in the lower portion of the femur; Profuse suppuration; mania; death. Tubercular deposits in the viscera, induration of both testicles; complete disorganization of the Prostate.*

Thomas Galloway, negro, seaman, aged 33, a native of Baltimore, was admitted on the 4th of October, 1841, with an excavated ulcer on the side of the tendo Achillis, just above the left malleolus externus. He had previously had an indolent swelling here, which proceeded to suppuration. This had given way about a month before his admission, and left the ulcer as above mentioned, the integuments around which were much swollen and indurated. The patient was put upon the use of iodine, and his limb was kept elevated and poulticed. Other local treatment was adopted in the progress of the case, but without any marked effect. The patient, during the winter, had an attack of erysipelas, after which the ulcer took on a more healthy appearance; but at the end of five months it had not yet cicatrized. He left the hospital, at his own request, on the 7th of March, 1842.

He was again admitted on the 25th of June following, with a small ulcer still open at the point above indicated. But his main difficulty was now seated in the opposite limb. The whole of the right leg and thigh appeared to be hypertrophied. The parts about the malleolus externus of the right foot were swollen and very tender, as if about to suppurate, and the patient appeared to be suffering from periosteal inflammation over the shaft of the tibia. He was put upon hydriodate of potassa, with anodynes internally, and the limb was enveloped in a poultice.

About the middle of August, a puncture, made on the inner side of the leg, just below the knee, gave issue to a considerable amount of purulent matter, which appeared to have burrowed upwards along the shaft of the bone from a great distance. The discharge continued subsequently to be rather free, and the patient began rapidly to emaciate, notwithstanding the use of quinine, and a diet as generous as could be borne. The swelling around the lower third of the femur still persisted, attended with much pain and constitutional irritation.

Towards the close of October, matter was detected above the knee. Through the puncture made for evacuating this a probe could be introduced several inches, apparently entering the shaft of the femur, but without detecting either sequestrum or exposed bone. As yet there appeared to be no internal organic lesion; and, as the patient was rapidly failing under the influence of profuse suppuration, he was advised to submit to amputation of the limb,—but to this he would not accede. About the first of March he suddenly became maniacal, and in the course of the next few weeks had several convulsions. The cerebral symptoms subsided, after existing about a month. But he continued to sink, and died, apparently from exhaustion, on the 4th of May, 1843.

The abscess in the right leg had not seriously affected the tibia, but the lower third of the femur was, at least, of twice its natural thickness, and as solid as ivory. It was partially penetrated on one side by a fistulous opening, large enough to admit the point of the thumb, but unconnected with any sequestrum, and scarcely reaching to the medullary canal. This canal appeared to be in part obliterated; and in part filled with a substance more like sebaceous than healthy medullary matter.

The lungs, liver, and spleen, were studded with miliary tubercles. Both testicles were indurated, but not much enlarged. The prostate gland had entirely disappeared, leaving only its capsule. Its proper texture was replaced by a mass of cartilage.

I had charge of the foregoing case only for a short time towards the close of it. But I am not aware that the patient ever gave any intimation of disease, either of the testicles or of the prostate gland; or that he ever had any marked difficulty of micturition. I have no record of the patient's complaints prior to the formation of the chronic swelling, which resulted in the ulcer in his left leg, for which he entered the hospital. But the occurrence of this, the subsequent periostitis, the induration of the testicles, and the cerebral symptom towards the close of life, lead strongly to the suspicion that the case was one of secondary syphilis, occurring, as before remarked, in a patient of strumous diathesis. The state of the prostate was peculiar. I have met with but one other instance in which this organ was so completely disintegrated.

Disorders of the prostate gland are not usually attributed to syphilis; yet, when we see how frequently the testicles are involved in this disease, sometimes only one, but more frequently both of them suffering, either simultaneously or consecutively, it is but fair to infer that the common point of irritation for both testicles, under these circumstances, is occasionally seated in this organ, as it is well known to be in gonorrhœal testitis, and in the chronic orchitis of old men who are laboring under hypertrophy of the prostate.

In examining the urethra of patients who are laboring under diseases of the testicle, it is not unusual to find this passage entirely free from organic obstruction, and in such cases the catheter almost always detects an extreme degree of sensitiveness in the neighborhood of the prostate, and near the neck of the bladder.

VI.—*Sloughing Chancres rarely followed by Secondary Syphilis.*

As long ago as 1838, I had occasion to remark while lecturing on syphilis, that secondary symptoms are rarely seen to follow sloughing chancres; owing, perhaps, to the fact, that the violent morbid action around the primary sore alters the tissues so effectually, as to prevent the absorption of the virus. This statement I have never had occasion to retract; and I have repeated it in lecturing almost every season since. Within a few months past, I find by the journals, that M. Ricord has recently made the same observation. He is disposed to think that the virus is rarely absorbed before the sixth day from the commencement of the primary sore.

Should the severe inflammation which usually precedes the sloughing, commence at a date much beyond this, it might then be too late to prevent the contamination of the system. But whatever be our theory as to the time and mode of general infection, the observation above stated is worthy of remembrance.

VII.—*Superficial Necrosis, in connection with Nodes, occurring early, and often overlooked.*

Among my hospital notes, at the date of January 15th, 1844, I find the following entry:

I have recently been operating on nodes of the tibia by subcutaneous incision, introducing a delicate bistoury through a puncture of the skin, and dividing the periosteum freely over the whole extent of the swelling. In the first case in which I resorted to this procedure, the patient had for some months been troubled with a node on each shin; but the integument over these swellings had never been inflamed. Notwithstanding the slight evidence of local disease, I found, in dividing the periosteum, that the point of the instrument, in both instances, grated over rough and carious bone. In another patient with three nodes on one shin, and one on the other, most of them small, I detected rough bone under one of the smallest of them, whilst beneath the others the bone was unaffected. Up to the present date, I have in all, operated upon four patients, and on nine nodes; and in three cases out of these four, I have detected diseased bone beneath sound integument.

I may remark that the subcutaneous section of the periosteum is followed by marked relief from the pains usually attending nodes; that by allowing the gummy exudation to escape from beneath the periosteum, it relieves the bone of pressure; and, if adopted early, it may arrest the further progress of caries and necrosis, as it appears to have done in the instances above mentioned, and in others in which I have since resorted to it.

VIII.—*Syphilis not incompatible with other Constitutional Diseases.*

The aphorism that no two general diseases can coexist in the same individual, may, perhaps, be obscurely traced in Sydenham's doctrine of epidemic influences. But John Hunter appears to have been the first to give expression to it.

In an essay on the Coexistence of Diseases, which appeared in the United States Medical and Surgical Journal, for October, 1835 (vol. ii., p. 82), I have attempted a critical examination of the facts adduced by Hunter in support of his proposition; and I have shown, I think, that neither his own cases, nor those advanced by Darwin in support of the same doctrine, are sufficient to warrant the general inference that has been drawn from them. And in the same article I have brought forward numerous examples, as well from my own observation, as from the writings of trustworthy authors, to show that this proposition should never have been advanced as it has been, by Darwin, Adams, and others, as one of the fundamental laws of morbid action.

As a practical rule subject to exceptions, it is worthy of much attention. I object to it only so far as it has been advanced as an absolute law. In this I am happy to find myself borne out by Dr. Stokes of Dublin, who, in conversation on the subject, and subsequently in a notice of the essay above mentioned, has expressed some surprise that the advocates of Hunter's proposition should ever have looked upon it as a law.

Were it not here out of place to refer to other examples than those in which syphilis is involved, I might adduce several new instances in support of the views which I have previously advocated. Singularly enough, Hunter's attention appears first to have been called to this alleged incompatibility of different diseases, while engaged in the study of syphilis. "The venereal disease," says he, "is not only suspected to be present in many cases where the nature of the disorder is not well marked, but it is supposed that it can be combined with other diseases, such as itch and scurvy. Thus we hear of pocky itch, and scurvy and the venereal disease combined; but this supposition appears to me to be founded in error. I have never seen such cases, nor do they seem to be consistent with the principles of morbid action in the animal economy. It appears to me beyond a doubt that no two actions can take place in the same constitution or in the same part at one and the same time."—(On the Venereal, 4to., Lond., 1788, p. 2.)

Now, if these remarks are true, syphilis should be considered among the best, because among the most available prophylactics against scurvy. But we have yet to learn that seamen, in long voyages, laboring under syphilis, are on that account, any the less subject to scurvy than their unprotected comrades. As to the itch, this at the present day is known to be a local affection of the integuments, as little likely to serve as a prophylactic against syphilis, or to cure it when existing, as hernia, or any other local disorder.

In the essay referred to, I have cited several instances of syphilis co-existing with other diseases. By referring to my hospital notes, I find that in December, 1843, I had at one time, in the same ward, two cases of syphilis combined with intermittent fever. The first of these was in a young German, with a recent secondary eruption upon him, and with a great enlargement of the lymphatic glands on the side of the neck; who had at the same time several regular paroxysms of tertian intermittent, of which he was relieved by the use of quinine. The second patient was an Irishman, who was laboring under both primary and secondary symptoms. In this case, the paroxysms of intermittent were watched with much interest by the students in attendance, and were not interrupted by treatment until after they had recurred at several regular intervals.

I cannot leave this subject without alluding to the recently alleged incompatibility between malarial fevers and phthisis. That these two forms of disease are rarely seen to affect the same individual conjointly, may be safely admitted. Yet the antagonism between them does not amount to actual incompatibility.

A family of several persons, as I have been informed, recently removed to a miasmatic district near this city, with the view of benefiting one of their number, a female, who was affected with incipient phthisis. The phthisical patient was the only one of them that escaped an attack of intermittent fever. Her disease was not mitigated by the miasmatic influence, but progressed to a fatal issue.

As a counterpart to the foregoing, I may cite the following case, which I saw for my friend Dr. Sterling, on the 18th of June last.

Case Sixth.—Mr. S——, about 32 years old, commission merchant, recently of Canada, has for two years been troubled with a cough and occasional spitting of blood; he has lost flesh, is short of breath, and has slight purulent expectoration, mostly in the morning. About a year ago, with the view of benefiting his health, he moved from Montreal to the Falls of Niagara, where he contracted a regular tertian ague which troubled him for some time, and for which he was again obliged to change his residence, and resort to the use of quinine. He cannot be mistaken as to the fact; and his wife suffered as severely from the intermittent fever as himself. Before this attack, he thinks he had night sweats occasionally. He has not suffered from these since. His cough, however, has continued without interruption. He has a remarkable incurvation of the chest near the lower part of the sternum; his pulse is feeble, and lower than usual, for a phthisical patient, ranging, when he is quiet, not over 58. He is still able to attend to business. There is no marked pectoriloquy, but considerable dullness in the upper part of both lungs, and slight mucous ronchus.

IX.—*Mercurial Cachexia, liable to be mistaken for Secondary Syphilis.*

My present object is not to speak of the injudicious administration of mercury. In illustration of the whole of this subject, I might adduce a much wider range of examples than I have here to offer. I have now to speak of mercurial cachexia so far only as it is liable to be confounded with secondary syphilis.

Case Seventh.—A medical gentleman, about 29 years of age, formerly of this city, of leuco-phlegmatic temperament, and of scrofulous diathesis, applied to me for advice on the 8th of April, 1843, and gave me the following account of himself.

"In the summer of 1832, I had an attack of epidemic cholera, and was treated by the internal and external use of mercury. Since then I have never been perfectly well. In the course of my education I was never able to attend closely to study—constantly indisposed to stirring exercise; but without any appreciable malady. I graduated in 1837, I married in the following year, and am yet without issue. In the winter of 1838, or early in the following spring, I took a jaunt to the Western States, and while away was exposed to excessive hardship, to long rides in carriages without springs, over rough and frozen ground. After one of these severe rides I reached the Ohio river and took steamboat for Pittsburgh. While in this boat I was exposed to severe cold on the deck at night, and all of a sudden I found that I was unable to walk firmly. I staggered, and had lost control of the muscles on one side of the body. On the following morning the paralysis had partially subsided. After reaching this city, where I then resided, I had a second and more severe attack, which affected my whole body, and for some weeks deprived me of consciousness. I gradually recovered; but I have never since enjoyed the full and free use of the muscles. Soon after this period, while residing in the interior of this State, an ulcer appeared on my left arm over the superficial part of the ulna, midway between the elbow and wrist. The arm wasted considerably; and the ulcer, after remaining open for four years, has very recently cicatrized. It was supposed by my medical friends to depend on disease of the bone: but the bone was never exposed. It might have been induced by a bruise on the part during my hard ride in Ohio. In attempting to heal this ulcer I have been several times subjected to alteratives, and as frequently salivated.

"Finding my general health impaired, and the ulcer still persisting, about two years since, I moved to the South. I have been subject to aphthous ulcerations about the mouth; and of late I have had an irritable throat. These symptoms, like the sore on my arm, have been attributed to syphilis. But from this disease I am sure I have never suffered. At times I have small eruptions on different parts of the skin, like ordinary herpes. These have appeared on the prepuce as well as on other parts; but I have been subject to them since my earliest youth, and they are now in no respect different from what they ever were. The sore throat, after existing a few months, has gone on to perforate the soft palate, and there appears to be some enlargement and ulceration about the tonsils."

On examination of the patient's throat I found that he had a small perforation of the soft palate, just to the right of the uvula. The left tonsil was swollen, and there were evidences of tumefaction, and the discharge of purulent matter from some unseen opening, above the velum, on the same side of the throat.

He was conscious that his intellect had of late been feebler than formerly; he had an impaired memory, and could not charge his mind with the least effect. He spoke with a slow drawling voice; he walked slowly and cautiously, lest by a sudden twist or mis-step he might fall. He had least power over his limbs when these were flexed. He could not turn his head suddenly, but did so with great caution. He was subject to excruciating headaches, which usually came on in the afternoon, and obliged him to lie down. He had, also, severe pains in the back of his neck. He was ordinarily constipated; and in evacuating his bowels he was obliged to resort to mechanical pressure over the muscles of the abdomen. He was usually much depressed, and stated that if not restrained by moral motives he would, to rid himself of suffering, have often been tempted to destroy himself. He was not emaciated, but his countenance was pale. His family were tubercular, but he had never had any disease of the chest. He had no tenderness on the spine; he had never had nodes, nor copper-colored blotches. I found him on the use of small doses of corrosive sublimate.

Viewing the case as one originally induced, and subsequently aggravated, by the excessive use of mercury, I advised him to quit it, to resort to vapor baths, to hydriodate of potassa, to the diaphoretic diet drink, to electro-magnetism over the spine and in the course of the muscles, and to detergent gargles for his throat. The effect of this treatment I have never ascertained.

The following case closely corresponds with the foregoing; and both appear to be equally attributable to the mercury employed in the cure of cholera.

Case Eighth.—B. W——, a carpenter, of middle age, and previously in the enjoyment of good health, had an attack of cholera during the epidemic of 1832; I treated him by calomel in large doses internally, and by frictions all over the body with Roe's ointment,—an application much in vogue in this city at that time, and composed of Cayenne pepper, gum camphor, and mercurial ointment. He recovered from the attack, but never afterwards enjoyed good health. Early in the following winter he became paralytic, and lay for four or five months on his back. In the following summer he regained, to some extent, the use of his limbs; but, though no longer paralytic, he was sluggish in his movements, and constantly complaining of muscular pains like those attending syphilitic rheumatism. His mind was much enfeebled, and he was no longer able to attend to his occupation. He had a leuco-phlegmatic appearance, and he had subsequently one or two attacks of hydrocele. He was finally carried off with acute pneumonia, in March, 1842.

In the winter of 1832-3, great numbers of paralytic patients were admitted into the hospital at Bellevue, in whom the loss of muscular power was traceable, as in the two foregoing cases, to mercury used to excess for the cure of the cholera, during the previous summer; and other milder cases I remember to have met with at the New York Dispensary. Since then I have met with instances of protracted and almost irremediable muscular debility, accompanied with obscure rheumatic symptoms, and pains in the bones, analogous to those of secondary syphilis, in persons who had resided in the South, and who had there been subjected to the free use of mercury for the cure either of bilious fevers or of functional disorders of the liver.

In reviewing the latter group of observations it might be questioned, how far many of the cases referred to, and reported under other heads, may have been caused by mercurial alteratives. That most of them had undergone alterative treatment is not to be doubted, and that some of them might have been modified by it, is admissible: yet not, I think, to such a degree as to lead us to question the direct agency of syphilis, in developing their peculiar features.

New York, September 12th, 1845.

ART. II.—*Two Cases, with Remarks.* By ALFRED C. POST, M.D., Surgeon to the New York Hospital.

CASE I.—*Case of Bloody Tumor of the Scalp, with remarks.* On the 4th of January, 1845, I was requested by Dr. William H. Hobart, to see a male infant, five days old, which had a large tumor of the scalp over the right parietal bone. The tumor had been observed soon after birth, when it was quite small, and it had gradually increased in size until the day before I saw it. It was nearly hemispherical in form, and about three inches in diameter, its height being equal to about half its base. It was not translucent, and it had a feel of obscure fluctuation, but no pulsation was perceptible in it. The child was rather small, but its health appeared to be good. The outline of the tumor was remarkably abrupt and well defined. I was disposed to regard it as a bloody tumor, but did not feel perfectly satisfied as to its character. I recommended a continuance of the course which had before been pursued by Dr. Hobart, viz , pressure with a bandage. On the 28th of January, I saw the child again with Dr. Hobart, and found that for the last few days its health had suffered; it appeared feeble and emaciated, and its breathing was slow and labored. The tumor appeared a little smaller than at my former visit. The child died on the following day.

Autopsy.—The tumor was found to consist of blood of a dark color and of a tarry consistence, contained in a sac which seemed to be formed externally by the aponeurosis of the occipito-frontalis, and internally by the pericranium, these two membranes adhering firmly at the circumference of the sac. The external table of the skull seemed to have been absorbed throughout the whole portion which was covered by the sac, and at the circumference it formed an abrupt elevated margin, which could be felt during life, and which gave rise to a sensation as if the bone had been deficient within the circumference of this ring. The brain was healthy: the cause of the child's death was not ascertained.

This tumor was evidently one of the class described by German writers under the name of cephalæmatoma. As the subject of bloody tumors of the scalp in infants is almost entirely overlooked by English writers on Midwifery and the Diseases of Children, and as probably no definite information on this subject is within the reach of many of the readers of this Journal, I take this opportunity of presenting a brief summary of the most important facts which are known with regard to these tumors.

Bloody tumors of the scalp, or sanguineous abscesses, as they have sometimes been called, seldom occur spontaneously, except in new-born infants. In some rare instances, they have been observed in older children, and even in adults. The attention of the profession was first particularly called to them by German writers, as Siebold, Michäelis, Nægele, Zeller, &c. These tumors are for the most part discovered at the time of birth, or very shortly after; sometimes, after an interval of several days, and very rarely, after the lapse of months or years. They present a great variety as to their size and prominence; they are usually soft and fluctuating, smooth on the surface, and in most cases circumscribed by a hard margin: by firm pressure, bone can be felt at the bottom of the cavity. The skin which covers them is pale and smooth, and without discoloration, and considerable pressure can be borne without exciting pain. They are usually small when first discovered, and gradually increase in size, sometimes becoming so large as to cover a considerable part of the cranium. In some cases which have been recorded, pulsation has been perceptible in them: this has been ascribed to a communication of the sac with some of the arteries of the scalp. These tumors are almost always situated over the parietal bone, and in the great majority of cases on the right side. They rarely extend over the sutures and fontanelles, but in almost all cases are limited by the bone over which they occur. The blood contained in these tumors varies greatly in color and consistence, being sometimes of a florid color, as if recently effused; sometimes dark and tarry; sometimes mixed in various proportions with serum, sanies or pus; sometimes inodorous; sometimes having an offensive odor.

Some writers think that the blood is always effused between the pericranium and the bone; others, between the pericranium and the aponeurosis of the occipito-frontalis muscle. But from the cases which have been recorded there seems to be no reason to doubt that the seat of the effusion varies in different cases. According to Velpeau and Geddings, these bloody tumors are found in five situations, as regards their depth. 1st, Between the skin and the aponeurosis: they frequently occur in this situation, being usually small and prominent, with a hard circumscribed margin, which, however, is not bony. By discutient applications, absorption may be promoted, or they may be laid open, and afterwards an emollient poultice applied; they heal readily by granulation.

2d. Between the aponeurosis of the occipito-frontalis and the pericranium. Geddings thinks that the tumors which were described by Zeller and Nægele under the name Cephalæmatoma, were in this situation, although these authors regarded the blood as being effused between the pericranium and bone. In this variety, the blood diffuses itself beneath the aponeurosis, until a barrier is produced by adhesive inflammation, forming a hard margin around it: sometimes there is no such barrier, and the outlines are not distinctly circumscribed. These tumors are not usually very prominent. When a tumor of this kind continues long, the sac becomes thickened and condensed, sometimes fibro-cartilaginous or bony; and in some instances the bone beneath becomes affected with necrosis: in the latter event, the encephalon may become involved in the disease, and a fatal termination may ensue. The hard margin surrounding the tumor is sometimes bony, sometimes fibrous or fibro-cartilaginous.

3d. Between the pericranium and bone. Many pathologists, as Nægele, Zeller, &c., regard this as the most frequent seat of bloody tumors. But, on the other hand, Dieffenbach, Velpeau, and others, are of opinion that these tumors are much more frequently situated externally to the pericranium. The adhesion which exists between the pericranium and the bone is such as to render extensive separation very difficult. When blood is effused in this situation, the bone is extremely apt to be affected with caries or necrosis, especially when the tumor has existed a number of weeks. Necrosis may be confined to the surface of the bone, or may extend through it, in which case, serious disease of the encephalon will follow. Several fatal cases of this kind are on record.

4th. Bloody Tumors of the Diplöe. These are not common: cases have probably been erroneously referred to this class, in which the effusion was between the bone and pericranium, and in which the pericranium was ossified. When the true bloody tumor of the diplöe is laid open, copious and dangerous hemorrhage is liable to occur: this is not the case with the other forms of bloody tumor which have been discovered. It is probable that most of the bloody tumors of the diplöe are erectile in their structure. These tumors have a tendency to grow to considerable size, separating the tables of the skull, and making injurious and even fatal pressure on the brain. When they grow outward, they have a distinct pulsation.

5th. Bloody Tumors between the Cranium and Dura Mater. Velpeau states that effusions of blood in this situation sometimes take place during labor. Bloody tumors have been observed, communicating internally with the sinuses of the dura mater, and extending through one or more perforations of the skull. Sooner or later the disease proves fatal by pressure on the brain.

There is a considerable difference of opinion among writers as to the causes which give rise to bloody tumors of the head. Some attribute them to mechanical violence occasioned by the use of instruments, or by the rude manipulations of the accoucheur. There is a form of diffuse bloody tumor which occurs in consequence of contusion, but the circumscribed tumors in question are entirely of a different character. They occur as often after natural and easy labors, as after those which are instrumental and difficult. Nægele saw seventeen cases, most of which occurred after easy labors. Similar tumors occasionally occur spontaneously in older children and in adults. Bloody tumors from contusion present different characteristics, being attended with discoloration of skin, and not having hard elevated margins. Valleix's theory, with regard to the cause of spontaneous bloody tumors, appears to be the most plausible one. He attributes the tumors in question to the pressure of the presenting part of the child's head against the os uteri during the early stage of labor.

There is in general no difficulty in the diagnosis of these tumors. The tumor which is occasioned by extravasation, from injury during labor, called by the German writers Caput Succedaneum, is diffuse, of a livid color, œdematous, pitting on pressure, without a hard and well-defined border, without pulsation. Abscesses may be distinguished by the accompanying symptoms of inflammation ; serous cysts, by their translucency. Geddings thinks that spontaneous bloody tumors primarily consist of dilated capillary vessels, which at a more advanced period become ruptured. When the tumor is of long standing, the cavity is lined by a false membrane. It is sometimes difficult to distinguish bloody tumors of the scalp from congenital hernia of the brain, and these diseases are often confounded with each other. But they ordinarily occur in different situations, hernia being rarely met with except at the sutures and fontanelles. When hernia is subjected to firm pressure, it retreats within the perforation of the cranium, and symptoms of cerebral compression ensue. In hernia, perforation of the bone precedes protrusion of the brain : in bloody tumor, the swelling precedes the hard margin. In hernia, no hardness is felt beneath the tumor on firm pressure, as in bloody tumor. In hernia, there is always pulsation, and it is stronger than it ever occurs in bloody tumors.

The prognosis in bloody tumors is generally favorable, except when the blood has been allowed to remain so long in contact with the bone, or to exert pressure upon it, as to occasion necrosis. When a fatal termination takes place, it is due to necrosis of the bone, gangrene of the soft parts, or excessive suppuration. Evacuation of the blood, when the bone is sound, is very seldom followed by unpleasant consequences : but fatal cases have been observed by Goelis, Brown and Steuart. It is unsafe to puncture or incise erectile tumors of the diplöe, as such opening would be followed by dangerous hemorrhage. The following is Nægele's view as to the manner in which a spontaneous cure of cephalæmatoma is effected. He states that, at the end of two or three weeks, the pericranium begins to ossify on its internal surface, and to approach the bone from which it has been separated, the blood becoming absorbed, and finally the ossified periosteum uniting with the bone. He states, moreover, that the bone remains from six months to a year preternaturally thick in the situation where the tumor had existed. Valleix states, on the other hand, that ossification advances from the inner margin of the bony ring towards the centre. Dr. Black asserts that ossification takes place both from the inner surface of the pericranium, and from the margin of the ring, and that the bony matter from both becomes united into one.

The treatment of bloody tumors of the scalp is very simple. Sometimes the tumor may be made to disappear by the absorption of its contents. To promote the activity of the absorbents, cloths may be applied moistened with a solution of Muriate of Ammonia or of Acetate of Lead. Chelius recommends the application of a compress and bandage. Geddings disapproves of this method. When discutient applications have been tried ineffectually for a fortnight, it will be safest to open the tumor and evacuate its contents. All writers agree as to the necessity of opening the tumor, when other means have failed. A moderate opening is sufficient when the bone is sound: the opening should be maintained by means of a small tent. When the bone is in a state of necrosis, a free incision should be made, and it should be dressed from the bottom with lint.

Persons, who wish to investigate the subject more minutely, will find much valuable information in an essay published by Dr. Geddings in the North American Archives of Medical and Surgical Science, for July, 1835, in one, by Dr. Black, in the Edinburgh Medical and Surgical Journal, for January, 1841, and in one, by Dr. Churchill, in the Dublin Journal of Medical Science, for November, 1843.

CASE SECOND.—*Account of an attack of Neuralgia affecting several of the teeth of the left upper jaw, the left side of the head and the larynx, cured instantaneously by the extraction of the left dens sapientiæ of the lower jaw.*—On the 5th September, 1845, about noon, I drank some lemonade, soon after which I suffered from a sensation of acidity of stomach and flatulence, with slight pains in the left bicuspid teeth of the upper jaw, and in the corresponding gums. In the course of the afternoon and evening, the pain increased in severity, and extended over the left side of the head and to the left ear, and the stomach continued to be the seat of uneasy sensations. At bed-time, I took a mixture of rhubarb and magnesia, which operated freely at about three or four o'clock in the morning. During the greater part of the night, preceding the operation of the medicine, I suffered so much from the neuralgic pains, that I was unable to sleep. Indeed the pain seemed to be aggravated by a recumbent posture, especially when I lay upon my left side. Accordingly, I spent a large part of the night in pacing my room, by which I experienced a certain measure of relief. After the operation of the cathartic, the pains were relieved to such a degree that I was able to obtain two or three hours sleep. On the 6th, I continued to feel more or less pain throughout the day, with loss of appetite, depression of spirits, and other indications of gastric disturbance. Towards night the pain came on with increased violence. I made a careful examination of the teeth of the affected side of the upper jaw, but they all appeared to be perfectly sound. I detected, however, an extensive caries at the base of the dens sapientiæ of the corresponding side of the lower jaw. There was no pain nor tenderness in this tooth, nor in any of those of the lower jaw. From the entire absence of morbid sensibility in this tooth, I concluded that it had nothing to do with the neuralgic affection from which I was suffering. After fomenting the side of my face with Vin. Opii., without any relief, I took a draught containing thirty-five drops of the same medicine. The pain continued unabated for an hour or two, during which time I was obliged to seek relief by pacing the room. I then returned to my bed, and soon after fell asleep. I slept during the remainder of the night, but with some interruption from pain. On the following morning, Sept. 7th, I arose unrefreshed by my sleep, and continuing to suffer from a dull aching pain in the same parts; the pain, however, was much less severe than during the early part of the night. During the day I was troubled with vertigo and nausea, which were probably occasioned by the opiate which I had taken the night before. In the evening the pain increased in severity, and extended to the upper part of the larynx, which afterwards became the seat of the most severe pain. At bedtime, I applied a large sinapism over the epigastrium, rubbed the left side of my face, the temple, and the region behind the ear, freely with a solution of three grains of veratrine in half an ounce of alcohol; and took internally three grains of calomel. The veratrine produced a burning and pricking sensation, which continued through the night, and was readily re-produced during the next day by simply rubbing with a finger the parts to which it had been applied. Under the use of these remedies, the neuralgic pains were greatly assuaged, and I was enabled to sleep during most of the night, although my sleep was often interrupted by the burning sensation induced by the veratrine. On the morning of the 8th, I had less pain than at any previous period since the commencement of the attack; but there was still considerable irritation in the parts to which the Veratrine had been applied. In the afternoon and evening an exacerbation occurred, at least equal in violence to that of the preceding evening, and affecting the larynx much more severely. As the calomel which I had taken the previous night had not operated, I took a full dose of rhubarb and magnesia, and made another application of veratrine, which, however, was not as free as before, on account of the soreness left by the previous application. During the first half of the night I was obliged to pace the room on account of the severity of the pain; I then had a free evacuation from my bowels, after which I was enabled to obtain some sleep. On the morning of the 9th, I had more pain than the previous morning, but much less than during the evening exacerbation. About the middle of the day, I commenced the use of the sulphate of quinine, of which I took ten grains before bedtime. My appetite was improved by it, and I was able to eat a hearty dinner, for the first time since the commencement of my sickness. But the evening exacerbation was as violent as any which I had experienced. At bedtime, I applied sinapisms to the back of the neck and to the epigastrium, from which I obtained some relief, so that I was able to sleep through the night with occasional interruptions. On the morning of the 10th, my condition was very similar to what it had been on that of the 9th. In the course of the morning I took 7½ grains of sulphate of quinine. In the afternoon, I called upon Dr. Crane, a skilful dentist in my neighborhood, to request him to extract the wisdom tooth which I found to be carious. I did this, not because I apprehended that the condition of this tooth had anything to do with my neuralgic pains, but because I thought that the tooth might be a source of future inconvenience. The moment after the extraction of the tooth, I felt at once that the whole source of my sufferings was at an end. The relief which I experienced was so instantaneous, so unexpected, and so complete, that I felt exhilarated and almost bewildered. Dr. Crane informed me that he had met with other instances, in which carious teeth, which were not the seat of pain or morbid sensibility, had been the exciting causes of distressing neuralgic pains, which had only yielded to the extraction of the teeth. He stated, moreover, that he had found this to be peculiarly the case with the wisdom teeth of the lower jaw, and that when these teeth were affected with caries, ear-ache was a very common symptom. The proximity of the lower wisdom tooth to the trunk of the inferior maxillary nerve, and the relations of that nerve to the chorda tympani, may perhaps account for this peculiar sympathy.

Facial Neuralgia is by no means an uncommon result of caries of the teeth. But there are some peculiarities in the case which has just been related, which appear to me to be worthy of notice. The most striking feature is the absence of pain and of morbid sensibility in the carious tooth, and in all the teeth of the lower jaw. This circumstance was well adapted to divert attention from the true source of irritation. The extension of the neuralgic pain to the larynx is also an unusual circumstance, and I do not recollect before to have seen any allusions to a similar condition. The pain in this situation was very distressing; it was aggravated by speaking, but not by swallowing; it was not attended with cough or dyspnœa. The pain in the temple, the ear, and the side of the head, was decidedly aggravated by lying on the affected side. The invariable aggravation of the pain, during the early part of each night, was a remarkable feature of the case. The immediate exciting cause of the attack seemed to be a disordered state of the stomach. Among the remedies which were resorted to, the application of veratrine and of sinapisms appeared to afford the greatest relief. Beneficial effects were manifestly derived from the operation of cathartics, in the two instances in which they were administered. Opium was resorted to but once, and then in an inefficient dose, from an apprehension that the secondary effects would prevent me from attending to my professional engagements on the following day. The sulphate of quinine, although its use was attended with an improvement of my appetite and general feelings, did not postpone or alleviate in any degree the nocturnal exacerbation of pain. The use of a cold shower-bath, which I am accustomed to take on rising from my bed in the morning, and which I continued to take during the attack, was uniformly attended with a temporary alleviation of the pain.

On relating the above case to Prof. Joseph M. Smith, my attention was drawn by him to a paper published by Doct. Rush, in the first volume of his Medical Inquiries and Observations, in which he alludes to some of the remarkable effects produced by caries of the teeth. I subjoin an extract from this paper.

Extract from "An Account of the Cure of several Diseases by the extraction of Decayed Teeth," by Benjamin Rush. M. D., "Medical Inquiries and Observations," vol. i.

"Some time in the month of October, 1801, I attended Miss A. C. with a rheumatism in her hip joint, which yielded for a while, to the several remedies for that disease. In the month of November, it returned with great violence, accompanied with a severe tooth-ache. Suspecting the rheumatic affection was excited by the pain in the tooth, which was decayed, I directed it to be extracted. The rheumatism immediately left her hip, and she recovered in a few days. She has continued ever since to be free from it.

"Soon after this, I was consulted by Mrs. J. R., who had been affected for several weeks with dyspepsia and tooth-ache. Her tooth, though no mark of decay appeared in it, was drawn by my advice. The next day she was relieved from her distressing stomach complaints, and has continued ever since to enjoy good health. From the soundness of the external part of the tooth and the adjoining gum, there was no reason to suspect a discharge of matter from it had produced the disease in her stomach.

"Some time in the year 1801, I was consulted by the father of a young gentleman in Baltimore, who had been affected with epilepsy. I inquired into the state of his teeth, and was informed that several of them in his upper jaw were much decayed. I directed them to be extracted, and advised him afterwards to lose a few ounces of blood, at any time when he felt the premonitory symptoms of a recurrence of his fits. He followed my advice, in consequence of which, I had lately the pleasure of hearing from his brother that he was perfectly cured."

"In the second number of a late work, entitled 'Bibliothèque Germanique Medico-chirurgicale,' published in Paris, by Dr. Bluver and Dr. Delaroch, there is an account, by Dr. Siebold, of a young woman who had been affected for several months with great inflammation, pain and ulcers in her right upper and lower jaws, at the usual time of the appearance of the catamenia, which at that period were always deficient in quantity. Upon inspecting the seat of those morbid affections, the Doctor discovered several of the molares in both jaws to be decayed. He directed them to be drawn, in consequence of which, the woman was relieved of the monthly disease in her mouth, and afterwards had a regular discharge of her catamenia."

I subjoin also a brief extract from Kœcker's Dental Surgery.

"Dead teeth and roots may frequently be considered to form the principal cause of many nervous and rheumatic affections of a very alarming nature, and accompanied with much pain, viz., various disorders of the organs of sense, the brain, the face, the ears, the eyes, and the more distant parts, under the form of tic doloureux, convulsions, epilepsy, hysteria, hypochondriasis, dyspepsia, and mental derangement.

"Dr. Rush states a case of madness, occasioned by decayed teeth, which were not painful."

Art. III.—*Lumbar Abscesses, Necrosis, Cimicifuga and Iodine; or a few Cases from my Note Book.* By N. S. Davis, Binghampton, N. Y.

Case I.—June 3d, 1844, was called to see William Landon, aged 20 years. Found him thin in flesh, much debilitated, mostly confined to his bed, pulse about 85, and small; tongue slightly coated with a white fur; a severe, dull, and almost constant pain in the loins, increased by any motion of the lumbar vertebræ, and sometimes shooting down the right thigh. The lumbar vertebræ were tender to the touch, and the bowels loose from the effects of a preparation of colchicum, which he had been taking rather freely. On inquiry I learned that some eight years ago he was severely sick, in consequence of having gone into the water when very warm from exercise. That in the course of this sickness, more or less extensive necrosis of the bones of his arms and legs took place; and chronic abscesses formed in several places on the extremities, both upper and lower; through which pieces of dead bone were discharged, varying much in shape and size. These had gradually healed, and his health had become much improved, when about three months since, the pain in the back or loins under which he is now laboring commenced. A physician was consulted, who considered the pain of a rheumatic character, and kept him for some time on the free use of the *colchicum*, to which I have alluded. The history of the case, together with the present symptoms, satisfied me that he was laboring under a disease of the lumbar vertebræ; and that a lumbar abscess would be the consequence.

Treatment.—A seton was introduced on the right side of the spine, on a level with the posterior part of the crest of the ilium. The bowels were regulated by very mild laxative and alterative medicine; and a saturated solution of iodine and hydriodate of potash in water, in doses of five drops three times a day, in a wine-glassful of the decoction of actea or cimicifuga racemosa root. And Dover's powders were occasionally given at night to procure rest. This treatment was continued, with very little alteration of symptoms, until July 1st. The emaciation had increased, the pulse become more quick, and the bowels more loose. The pain was also more severe in the right hip.

Another seton was now introduced just behind the right trochanter major; the iodine and decoction of racemosa root continued, the former having been gradually increased from 5 to 10 gtts. for a dose; and an anodyne regularly every night, to allay the irritability of the bowels, and procure rest.

July 26th.—During the last three weeks the emaciation has gone on rapidly. The pulse is now 110 per minute; the lumbar vertebræ excessively tender to the touch, and the pain extreme, the bowels still loose; the tongue but slightly coated, and the appetite considerable. A swelling has gradually made its appearance on the right side of the spine, near the place of the first seton, and extends anteriorly to the right inguinal region. An obscure fluctuation can be felt, and the tendency to hectic fever is well marked. Continue the same treatment, with the addition of poultices and fomentations to the affected part.

July 30th.—Saw the patient, in consultation with Dr. S. West. The swelling has increased until it fills the whole right inguinal and iliac regions, with a distinct pointing over the posterior part of the crest of the ilium, and fluctuation. All the other symptoms are also aggravated. Indeed such are now the hectic fever, emaciation, debility, and intense sufferings of the patient, that but little hope can be entertained of a recovery. It was now thought advisable to open the abscess. I accordingly drew the skin to one side, and made a free opening into the most prominent part of the swelling over the crest of the ilium. More than a pint of thick, greenish, flocculent, and fœtid pus was discharged, and the opening closed by adhesive straps. The flakes of lymph were large, and sometimes obstructed the opening so as to require the use of a probe. The same internal treatment was continued, the dose of iodine being increased to 15 gtts., and the decoction ordered more freely.

Aug. 3d.—The hectic fever, emaciation, and debility still continue to increase. Diarrhœa is also more troublesome, requiring the free use of astringents and opiates. The opening made in the abscess four days since, healed by the first intention, and remained so until to-day, when the abscess having become again distended, it opened spontaneously in the same place, and discharged one pint of *pus* resembling the first, only more fœtid. It was simply dressed with adhesive plaster. During the last three or four days a swelling has appeared in the left side, in all respects similar to the one in the right, and is still increasing. The pulse is 120 per minute, and small. The iodine, decoction, opiates, and astringents are still continued, with fomentations to the left side.

Aug. 6th.—The swelling on the left side has developed itself rapidly, and presents to-day, a distinct pointing over the ilium, directly on the opposite side of the spine from the opening in the first. I opened it in the same manner as the one on the right side of the spine. A tea-cupful of thick, flocculent, and fœtid pus was discharged, and the wound closed. Decided relief was felt, and the same general treatment was continued.

Aug. 9th.—The opening in the last abscess remained closed only two days, when it commenced discharging freely, and without any increase of inflammatory action. Both abscesses are now discharging freely a thin, green, and fœtid matter, containing some white flocculi.

The hectic fever is constant, and the emaciation extreme; the pulse 120 at evening; the bowels still very loose; the pain in the back almost gone. The thighs are flexed on the abdomen, without the ability to extend them. Sulphate of quinine, aromatic sulphuric acid, and opiates, with a more nourishing diet, were now ordered.

Aug. 11*th.*—All the symptoms aggravated. Discontinued the quinine and aromatic sulphuric acid, and return to former treatment, viz., a solution of iodine and hydriodate of potash in water, 15 gtts., given in a wine-glassful of the decoction of actea racemosa root, three times a day; with sufficient opium, infusion of oak bark, or alum, to keep the diarrhœa in check.

Aug. 15*th.*—The quantity of the discharge from abscesses is lessened, and somewhat improved in quality; very little pain in the back except on motion; pulse 100 per minute.

A small abscess has also appeared in the right groin, just below Poupart's ligament, and is discharging some matter. Otherwise same as on the 11th. Continue same treatment.

Sept. 1*st.*—All the symptoms slightly improved. Continue same treatment.

Oct. 1*st.*—The hectic fever and diarrhœa have entirely ceased; the abscess in the groin and the left side of the spine have nearly ceased to discharge matter; pulse 90 per minute; flesh and appetite begin to return; and can partially extend the thighs. Continue same treatment, with frequent omissions of the iodine for 24 hours at a time, and the exhibition of a mild laxative.

Nov. 1*st.*—Patient rapidly recovering. No discharge from any of the abscesses; able to bear his weight on his feet; appetite good; bowels regular, and pulse 80 per minute. Omit the iodine, and give only the actea racemosa, aralia, nudicaulus, taraxacum, &c., roots, made into a syrup.

Sept. 1*st.*—Patient has been five months well, fleshy, and able to go about without difficulty, except a partial anchylosis or stiffening of the lumbar vertebræ. Remarks:—The reader may be ready to ask if the iodine and cimicifuga root did not cause, or at least increase, the tendency to diarrhœa, in the foregoing case. We answer, that they did not, because they were more than once omitted several days on purpose to test that fact. Leeching, in the commencement of the treatment, was omitted for want of leeches; and direct *tonics* increased the irritability in every stage of the case.

Case II.—Mrs. Stansbury, aged 30 years, a hard-working colored woman, and the mother of several children, was taken with pain in her back, and all the local symptoms similar to those detailed in Case 1st. The disease was, however, confined to one side; there was no diarrhœa, and not so much emaciation as in the former case. After the pain in the loins had continued several weeks, a swelling first appeared in the right lumbar region, over the crest of the ilium, but gradually disappeared without being opened, and was soon followed by a swelling, accompanied with considerable pain, about the middle of the outer part of the right thigh.

She was put on the use of iodine and decoction of cimicifugo racemosa root, with occasional intermissions, in which mild laxatives were given, and repeated *blisters* over the sacrum and lumbar vertebræ. This treatment was continued about three months, during which the pain in the loins and the right hip diminished, but the swelling in the thigh slowly increased, with much "stinging, smarting pain." The fluctuation was plain, but the matter deep-seated under the strong fascia on that part of the thigh. An oblique opening was now made with an abscess lancet, and more than a pint basinful of matter discharged, of a greenish color and almost as thin as water. The wound was healed by the first intention. No febrile symptoms followed, and all the symptoms gradually improved. The same treatment continued—the abscess was re-opened four times in as many months, discharging each time the same *kind* of matter, but each time less in quantity. In nine or ten months from the commencement, the abscess had disappeared, and the patient seemed restored to health. She has since become pregnant, gone her full period, and been delivered of a large and healthy child, and is now free from pain in the back and swelling in the thigh. The same treatment was continued throughout. In this case the swelling occasioned by the matter in the thigh would not wholly disappear when the patient took the horizontal position. But can there be any doubt whether the matter originated in the psoas or lumbar region? We think not.

We might here enumerate several cases of *scrofula*, in its most common form, of swelled glands; in which the aqueous solution of iodine and hydriodate of potassa, given in the decoction of the cimicifuga root, was promptly successful. Their detail, however, presents too much sameness to be interesting. But neither in scrofula, nor in the two foregoing cases of chronic abscess, or disease of the lumbar vertebræ, do we attribute any considerable curative influence to the cimicifuga racemosa root alone. Our experience, however, induces us to believe that, as a vegetable diluent and alterative, to be used in conjunction with iodine, it is decidedly preferable to the sarsaparilla as we find it in the shops, and indeed equal to any other vegetable we possess. It is a mild tonic, and gently promotes all the secretions of the system, and especially those of the pelvic viscera. Instead of irritating, it seems to possess a soothing or quieting influence over the nervous system. We have found this latter influence very marked in many cases of severe headache, apparently depending on simple irritability of the brain connected with sexual weakness. In several such cases we have given a simple decoction of the root, in doses of a wine-glassful every three or four hours, with the most prompt relief. Careful observation in numerous cases has also taught us that iodine is borne much longer and in larger doses when given with this decoction, without any unpleasant effects on the stomach, than when given alone; an advantage of no small importance in the treatment of chronic and scrofulous diseases. We have also used it in several cases of chronic rheumatism, but without any very marked benefit. The use of this remedy, in connection with the following severe case of chorea, may be interesting to the reader.

Case III.—*April* 15*th*, 1845.—Mr. G——, aged 20 years, of a slender form and active temperament, in the latter part of March incautiously exposed himself to sudden cold. He was taken with cold chills, headache, moderate fever, with severe paroxysms of chorea; during the first week the intervals between the spasmodic paroxysms were of several hours' duration, but they grew more and more frequent, until he obtained scarce an hour of repose either day or night. An intelligent physician in the neighborhood was called at the commencement of the attack, but becoming himself sick, I was called on the 15th of April, to take charge of the patient. I found him much emaciated; head hot; eyes sunken and conjunctiva slightly injected; skin cool; tongue covered in the middle with a dry, brown coat, red along the edges and tip; lips dry, and teeth covered with a brown sordes; pulse 85, compressible; bowels torpid, though easily moved by cathartics; not much pain anywhere; no tenderness along the spine; abdomen very flaccid; and little or no appetite. All the voluntary muscles of the face, neck, trunk, and extremities, were in almost constant spasmodic action, of so violent a character as to require the unremitting attention of one, and much of the time two, men to keep him from doing serious injury to himself. His mental faculties were but little affected. The patient had been some months previous to this attack afflicted with slight rheumatic pains in the lower extremities. He had been catharticised freely, taken alteratives, opiates, stramonium; been bled once or twice from the arm; had repeated blisters applied to the back of the neck, and tartar emetic ointment; sinapisms to the extremities; a variety of antispasmodics; and lastly, a fair trial for two or three days with the lobelia inflata; and all without any permanent good effect. *Treatment*—while two men held him I cut off his hair as close as possible with shears, and poured a continuous stream of cold water on his head, principally over the occipital region, for some minutes, and then kept cold cloths constantly applied to the scalp, directing the showering to be repeated every two or three hours; and ordered him a strong decoction of the cimicifuga root in wine-glassful doses, every four hours, with a laxative pill at night.

April 16*th*.—Found the patient nearly free from spasms, the tongue and lips more moist, pulse only 60 per minute, and weak, head less hot, skin cool, bowels moderately moved, abdomen exceedingly flaccid, and great muscular prostration. Directed the showering of the head to be repeated only twice a day, otherwise continue the same treatment, with a more nourishing diet.

April 20*th*.—There has been no return of the spasms, and though great prostration of strength continues, yet all the symptoms have gradually improved. Directed the cold applications to be discontinued, unless the head again became hot; continued the decoction with a still more nourishing diet.

From this time the patient gradually recovered, without any recurrence of bad symptoms, and is at present (September, 1845) enjoying his usual health. How much influence is justly attributable to the use of the cimicifuga in this case, we leave to the reader to judge for himself.

Several cases are on record in which it is said to have proved effectual in curing this disease.

In the foregoing pages we have used the names actea and cimicifuga indiscriminately; and Eaton applies the term, *mycrotis racemosa*, to the same plant. It grows in great abundance along the Susquehanna Valley in this county. We always use the fresh or recently dried root.

Art. IV. *Erect Vision from an Inverted Image.* By B. F. Joslin, M. D., of New York.

To determine how an inverted image on the retina occasions a perception of an erect object "has been long a problem among the learned."* Various explanations have been given by different physiologists and philosophers. The theory most generally received at the present day, is that founded on the law of "visible direction."† In this theory it seems to be assumed as an ultimate fact, that the mind perceives what direction is perpendicular to the retina. Some are satisfied with assuming, no less gratuitously, that we have a direct perception of the direction in which the rays of light emitted from objects come to the eye; as though the mind could, by a magical exploring power, travel out of its habitation, and feel along the course of the rays. We find such views, not only in popular works on natural philosophy; but Magendie—a writer seldom satisfied with superficial or inexact views—remarks, that "We believe, instinctively, that the light passes in a right line, and that this line is a prolongation of that pursued by the ray which has entered the cornea." If others refer this perception of the course of the rays to experience, the explanation is vague; the mode in which experience determines this has not been satisfactorily explained. If they deny any power of determining direction by the eye, independently of the sense of touch, they overlook the muscular sense of the ocular muscles. Some have maintained that infants see objects inverted. Others have pronounced erect vision from an inverted image, an inexplicable phenomenon. In this last class we may place Prof. Dugald Stewart and Dr. Abercrombie. The latter remarks that, "All that can properly be said appears to be, that such is the constitution of our nervous system." Are we then, with these philosophers, to regard this as an ultimate fact, one not susceptible of being analyzed and referred to the same class with others more simple and more general?

It is in the first place necessary to state that the subject requires to be considered in a twofold view—viz., First, in regard to the relative position of objects as compared with the earth or with the observer at rest; Secondly, as to the relation between this position and the direction of our own voluntary motions.

Let us first consider it in the first sense, which appears to be that in which the problem is generally understood by those who have attempted a solution, as well as by those who find a difficulty in conceiving how an inverted image can do otherwise than give a perception of an inverted object.‡

When we have a just idea of the signification of the terms erect and inverted, it will not be difficult to discover that the perception of erectness in an object involves a principle which is more elementary, and which is not confined to vision. If we show that the same principle extends to the sense of feeling, we shall have advanced at least one step in the investigation of this apparent anomaly.

Now considered without any reference to the course or bearing of our voluntary motions—i. e., reference to the particular direction in which the eye or hand is to be moved to trace it—an object appears erect or inverted only with reference to some other object, with reference to the earth for example, or with reference to the body of the observer. If I am conscious of being erect, and if I perceive another individual in the same position with myself, I perceive him to be erect also. Now the obscurity in which the theory of the perception of position has appeared to be involved, has resulted from the confusion which has been introduced by comparing one object with the image of another, instead of comparing objects with objects, and images with images, or in other words, from comparing the perception of one object with the sensation produced by the image of another, instead of comparing perceptions with perceptions, and sensations with sensations. If I am standing, and a man stands erect before me, I do not compare the sensation produced by his inverted image with the perception produced by the inverted image of my own body; but I compare the sensations produced by the two images.

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* Brewster's Optics. † Ibid.

‡ Even Magendie, who considers it an assumption wholly unsupported by proof, that infants see objects reversed, seems nevertheless tacitly to admit its possibility.

It is easy to conceive that our minds might be so constituted, that the impressions made on any two contiguous points of our organs of sense might be attended by a perception of contiguity in the objects, and that distance between the points impressed—i. e., the intervention of intermediate points of the organ—might be attended with the perception of distance between the objects. Surely no one can conceive any reason why an impression on two contiguous points should give a perception of remoteness. If it gives any perception of location, it must be that of contiguity. This, if a principle, would suffice for showing the correctness of our earliest notions of the relative position of external objects. But instead of viewing this as an ultimate principle, I derive it from others more elementary, and consider the perception of angular distance and in one sense that of contiguity, as dependent on muscular feeling, maintaining, however, that after a very short experience, simultaneous impressions on contiguous points give a perception of contiguity, and those on remote points a perception of remoteness, and that consequently it is impossible that erect objects could appear inverted when their parts are viewed either successively or simultaneously. To leave nothing vague, let us consider what is the fundamental idea of contiguity and as preliminary to it—of contact. If I place my finger so near an object as to feel its resistance, I touch it. This is my fundamental idea of contact, yet I can conceive that a closer proximity might be required in order that a being differently constituted should receive the same sensation, and I believe that no two particles of matter are in absolute contact. The above, therefore, is not absolute contact, strictly and mathematically considered, but it is physical contact, i. e., such a degree of approximation as produces on us a sensible repulsion.

Now, to examine an object by the sense of feeling, requires contact with the organ of feeling. If I move my finger continuously along the surface of an object, so as to be in contact with its different points in succession, my muscular sense informs me not only of its repulsion, but of the different degrees of motion requisite for the examination of different parts. Any two parts whose successive examination by the same point of the finger requires no movement, or the least appreciable movement of the finger, I consider contiguous. This is the elementary idea of contiguity, as perceived through the medium of feeling.

Let us apply this principle to the eye. The finger—eminently the seat of the sense of touch—sustains a relation to the body in general similar to that which the central part of the retina sustains to the retina in general. This central part is the immediate organ of distinct vision. The image, here formed in the axis of the eye, is that which gives the most distinct perception ; and hence an accurate ocular examination of an object of sensible extent requires some rotation of the eyeball, by means of its muscles. Adaptation to distance in a given line also requires muscular action. Hence, if I direct my eye successively to the different parts of an object, my muscular sense informs me of the different degrees of motion requisite for the examination of different parts. Any two parts whose successive and accurate examination requires no muscular action, or the least appreciable muscular action, we consider contiguous. This is the elementary idea of contiguity, as perceived through the medium of vision. If, with the eye or finger, we trace an object from any given point of it, we consider its other points as more or less distant, according as their examination requires a greater or less extent of muscular action. Whether this extent is greater or less, we are informed by the muscular sense.

The perception of the true relative position of external objects is referable to the foregoing principles, which are common to sight and feeling. Let us make the application to vision. Suppose I am viewing a man who is standing erect on a horizontal plane—the image of the man's feet on my retina is certainly contiguous to the image of the plane—I therefore perceive the actual feet to be in contact with the actual plane. Of all parts of his image, that of his head is most remote from the image of the plane. I therefore necessarily judge that the actual head is the part of the body most remote from the actual plane. In short, I perceive that the man is erect and not inverted ; in other words, that he stands on his feet, and not on his head.

The same principle is applicable if the body of the observer—instead of the earth—be considered as the standard of comparison. If, whilst I am conscious of standing erect, I include, in the same field of vision, another man's body and a part of my own, and if my image and his have a similar position, it follows, from the foregoing principles, that he must inevitably appear erect, although his image is reversed, with respect both to his body and mine.

We see then that there is not only a reason why objects appear erect, but why it is impossible that the eye could have been so constructed as to make them appear reversed. If the eye had consisted of an optical apparatus, which, like a camera lucida, should have changed the position ninety degrees, instead of one hundred and eighty, everything would have appeared precisely as it does at present; simply because the images of all bodies—our own included—would have had the same relative position that they now have.

That we have no direct perception of absolute position in space, is evident from every day's experience ; for the globe we inhabit is at any one moment reversed with respect to its position twelve hours previous ; yet, from a comparison of objects on its surface, we perceive no change of position. So forcibly and habitually is this impressed upon our minds, that thousands, who are convinced of the earth's rotation, find it difficult to realize, whilst the mass of mankind are with difficulty convinced of the fact ; and no man would have discovered it, if no world but this had existed.

Whether we consider the perception of contiguity as resulting directly from the contiguity of the parts impressed, or mediately through the muscular sense, it is evident that this perception must be one of the earliest elements of our knowledge of position, and that there neither is, nor can be, any kind of eye so constituted as to make erect objects appear inverted, either with respect to the earth or an erect observer.

If we had made no reference to muscular action, the greater part of the foregoing reasoning would have been the same; and it is true, that, after a very short experience, we can judge of contiguity and angular distance from simultaneous impressions. The variable distinctness of these for different parts of the retina affords data. But as this distinctness diminishes equally in all directions from the centre, it affords no data for immediately determining in what direction we should move the eye, in order to obtain a distinct view. This leads us to the second division of our subject.

Let us now consider the question in its second sense. This is a kind of practical sense in which we may speak of knowing the position of objects, i. e., knowing in what direction to roll the eye, or move the hand, in order to trace the object from top to bottom, or bottom to top, from right to left, or left to right, &c.

The particular modes in which different directions and different degrees of angular distance are estimated by muscular action, it is not essential here to consider. In the "Physiological explanation of the beauty of form,"* I have recognized in the vision of objects, the necessity of tracing them by means of the ocular muscles. This art, with its resulting knowledge and pleasure, is acquired only by experience. The young infant, though created with mental faculties for the estimation of form and magnitude, and for the enjoyment of beauty and grandeur, has no actual perception of either. In the investigation before us, we are chiefly concerned with the mode of estimating direction.

Suppose a child who has acquired the use of his hands, but who has been blind from his birth, to have the sense of sight given him by a surgical operation. At first he would be utterly unable to point towards any object, of whose situation he had no knowledge except that given by the eye. For example, suppose him looking at a star through a tube held near his eye by another individual. He would be unable on a first attempt, to direct his finger or arm toward the star, and would be as liable to move it in the opposite direction. If a higher and a lower star were visible through the same tube, and his finger were already directed toward one of them, he would be utterly unable to decide as to what kind of volition was necessary in order that his finger should move toward the other. He would be liable to the mistake of moving it up instead of down, to the right instead of the left, and in directions at all possible angles with the required direction. It would be the same with the different parts of a single object. Suppose whilst he is pointing to the centre of the moon, he is required to point to its upper limb; he would in attempting it, be as liable to commence the motion in the direction of one radius of the disk as in another. In this sense of knowing its position, he has no knowledge of it at all; in this sense he neither sees it erect nor reversed. He can neither direct the hand nor the tube to any required part.

In directing the eye itself by the action of its muscles, his difficulty would in the first instance be as great, and subsequently much greater. Having no experience in this kind of motion, the direction of it would require a longer education. His condition as an observer, engaged in directing either the tube or the eye, would be infinitely more perplexing than that of an astronomer furnished with a telescope and required to change the direction of its axis from one star to another in the same field, having no information as to whether it gives erect or inverted images, and having no guide except the apparent positions as seen through the telescope. The first motion of the astronomer would be either in the proper direction, or exactly the reverse; the novice in vision would be liable to err in an infinite number of directions. We are not to infer that this confusion would be in the least degree owing to the inversion of the image on the retina; were the image erect, the difficulty would be precisely the same. In both cases, experience would be required for the proper direction of the eye, and for the proper direction of the motions of the body. This experience we all acquire in infancy.

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* Transactions of the Medical Society of the State of New York.

Our conclusions then are, first, that infants cannot see objects reversed; secondly, that the inversion of the image does at no period of life increase the difficulty of obtaining correct perceptions; thirdly, that any position of the image gives a correct perception of the relative position of objects with respect to each other, the earth and ourselves included; fourthly, that neither the erect nor any other position of the image could afford us any direct and immediate aid in tracing the object with the eye or the hand.

I will explain how a correct perception of position in the first sense—i. e., the position of objects with respect to that of other objects, and of our own bodies considered objectively, aids the acquisition of it in the second sense; i. e., in the sense of knowing what volition to make in order that our organs—as the hand or the eye—may move toward them.

I will illustrate it by the use of the telescope. When a young astronomer uses a kind of telescope to which he is unaccustomed, he may at first move it in the wrong direction, in attempting to bring a star nearer the centre of the field; but perceiving that the effect is to remove it farther from the centre, he learns to correct his mistake; and after repeated corrections, he acquires facility in directing the instrument.

Now, in what I have said of original ignorance as to the proper direction of the hand, I have not only confined it to first attempts, but supposed the view of the hand, as well as of other objects, to be cut off by a tube. Let us see how, under ordinary circumstances, our education in regard to a knowledge of position, in the second sense of the terms, is facilitated by that correctness of perception which I have proved necessarily to exist in relation to the first sense. I have said, that proximity and remoteness of two images, respectively give us perceptions of proximity and remoteness in the objects. Now suppose the view of the hand unobstructed. As the novice in vision moves his hand, its image on his retina may either approach the image of the star or it may recede from it. If it approaches, then the real hand also approaches the direction of the real star; if the images separate, so do the directions of the objects. Thus, as he neither sees objects inverted, nor motions reversed, his visual impressions afford a correct guide in the education of his hand. In learning to direct his hand, he therefore has the aid of a principle similar to that which the astronomer employs in learning to direct his telescope.

The following recapitulation may afford a brief explanation of erect vision from an inverted image. When objects are in contact, their images on the retina are in contact; when the objects are more distant, their images are more distant. Hence these images give an approximately correct perception of the relative distance of objects and parts of objects; and a man standing on a horizontal plane, cannot appear to have his head on the plane and his feet in the air. Thus after a slight experience, the infant observer has some knowledge of angular distance, i. e., is conscious of the necessity of some volition in changing the objects of distinct vision. Yet of that specific character of the volition which is requisite in order that the motion may have the requisite direction, he may still be ignorant. In attempting to trace the object upwards, he might move the eye downwards, or to the right or left. He acquires by subsequent experience the art of directing the eye; and, in acquiring this art, he is aided by the correctness of his motions in regard to proximity and distance, and guided by the muscular sense.

The mind is not like an observer stationed behind the retina to compare the position of the image with that of the eye; as we neither see objects inverted nor motions reversed, and know, from the increasing distinctness, when the direction of the eye is approaching that of the object, we learn to regulate its motions. The experience essential for perfecting our knowledge of visible direction and position, is in the use of the muscles which change the position of the eye. These alone would suffice; those which move the head are auxiliary. This theory of the knowledge of direction and position differs from that which refers it exclusively to the education of touch. Touch is often auxiliary, but never essential. A knowledge of visible direction would be acquired by an infant, though its hands were immovably confined.

I shall conclude with an examination of "the law of visible direction," as applied to the explanation of erect vision. The reasonings and experiments here referred to are those found in Brewster's Optics. The law is this: the "visible direction" of any small object or point, is in a line drawn at right angles to the retina from the point of the retina on which its image is situated. Sir David Brewster,—a philosopher highly and justly respected for his numerous and valuable contributions to optical science, and regarded as the highest authority in matters pertaining to the eye—affirms that "this law, deduced from direct experiment, removes at once every difficulty that besets the subject" of erect vision. I am not able to discover, in what he denominates "this important law of the physiology of vision" anything which, if true, has any bearing upon the theory of erect vision—anything which has the slightest tendency towards the solution of the real problem, nor in the experiments adduced in support of this law, any proof of its exact truth. The true theory of visible direction is intimately connected with the true theory of erect vision. A true explanation of the reason why we see all objects and all their parts in their actual directions, is an explanation of the reason why we see them in their actual position. This is what I have attempted. To show the fact that an object is seen in a certain direction, is one thing; to show the reason why it is seen in that direction, is quite a different thing. D'Alembert must have seen this distinction when he admitted as a fact this direction,—on which Sir David Brewster insists as an explanation, but would "not undertake to explain" why the object is seen in this direction.* Should we state that any point is seen in the direction of a line drawn from its image on the retina to the common point of intersection of the axes of different pencils of light, this would be no explanation of visible direction nor of erect vision. The statement would have the same merits and demerits as this other celebrated law of visible direction, viz., it would be both true and superficial. It would be equally adapted to popular use. A single glance at a diagram of the eye and the refracted rays would produce general conviction. How could any one doubt that the two ends of the object must be found in the direction of the axes of the pencils of light which had emanated from them? Most persons would exclaim, "Surely it must be seen erect." Yet, in recent and highly-respectable works, and on the authority of Sir David Brewster, as the highest authority in such matters, the law of visible direction is referred to as affording the most satisfactory explanation of erect vision.† If it could be proved that the perpendiculars to the retina show the exact direction in which objects appear, still the reason why objects appear in this direction would be as far from being explained as before. Can any standard of direction give any knowledge of direction, unless we have some idea of the direction of the standard? We might as rationally presume that we could obtain an exact idea of the length of objects by the application of a measuring rod of whose length we were totally ignorant, or guide a ship by the needle without a knowledge of its declination or variation.

Passing over the gratuitous assumption which seems to be implied, and to which I formerly alluded, viz., that we have an instinctive idea of the position of these perpendiculars—let us consider the facts relied on for the establishment of this theory. The first is this:—An object seen through a small segment of the pupil appears in the same direction as if seen through the whole. In other words, the lateral or peripheral portions of the pencil will, if concentrated on the same point of the retina as the central parts, give a perception of the same direction as the central part, or the same as the whole pencil.

Now, the only legitimate inference from this undoubted fact, is, that the apparent direction of an object does not depend upon the direction in which the light arrives at the retina, but simply upon the situation of the part of the retina impressed.

All these supposed confirmations are but repetitions of the same general fact. If a more permanent impression is made on the retina, so as to produce a protracted vision of an object after its withdrawal, this ocular spectrum must of course, on any theory, obey the same law of apparent direction as the real object. Yet Sir David Brewster thinks it a confirmation of this law, that the ocular spectrum seen on shutting the eyes after viewing a black paper figure of a man held up in the direction of the sun, appeared erect or inverted according to the position of the object.

He also adduces the fact that "if we press the eyeball at any part where the retina is, we shall see the luminous impression which is produced, in a direction perpendicular to the point of pressure." On this I would remark, that when mechanical pressure on the eyeball produces the perception of light, the direction of the imaginary external luminous point from which the light appears to proceed, must appear to be the same as that from which light must have actually proceeded, in order to fall on the part of the retina mechanically pressed. Whether it be an actual luminous impression from without, or mechanical pressure generating irritation or light within, the law which I have stated applies; viz., the law of connexion between apparent direction and the locality of impression. The retina being so constituted as ordinarily to give no perception but that of light; then if a pin-head excites it through the other coats, or a star through the humors, in either case there appears a luminous point; and this point, whether real or imaginary, must appear in the same direction, if the impressed point of the retina is in both cases the same.

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* Vide Proceedings of the British Association for 1838, in which Dr. Brewster attributes the law to Dechales, Porterfield and Reid.

† Elliotson's Physiology.

The same law of locality of impression applies to another of Sir David Brewster's supposed confirmations of this law of visible direction by which he explains erect vision. The fact which he adduces is, that pressure on the eyeball changes the apparent direction of objects. His explanation is that such pressure "alters the spherical form of the surface of the retina," and consequently the direction of its perpendiculars, which we regarded as the lines of visible direction; and alters their place of meeting which is regarded as the centre of visible direction.

In order to test this theory, I resorted to a simple experiment, which any one can easily repeat, and by which the theory is refuted. I place a candle at a short distance before me, and look at a more distant object beyond it. Then, as the light falls on dissimilar parts of the two retinæ, I see two flames. If I then press the right eyeball with the finger; the left flame, which is that seen by the right eye, changes its apparent place. Now the problem is to determine whether this change of apparent place is attributable to a change in the location of the image on the retina, or to a change in the form of the eyeball. In one respect, the problem is a little complicated, inasmuch as a change in the form of the retina would generally be attended by some change in the locality of the part impressed, as well as by a change in the direction of its perpendicular; so that even were the axis of vision unchanged by the pressure, Sir David's explanation would not be confirmed by the effect of pressure in changing the apparent direction. The effect might still be—and so far as depends on change of form undoubtedly is—owing to change of locality in the image. But in order to remove all ambiguity arising from this source, and to render it evident that the change of direction in the object produced by pressure is not chiefly attributable to a change of form in the retina, I modify the foregoing experiment in the following manner: Instead of forcibly pressing on the eyeball, I rub the finger gently over it, so as to rotate the eyeball without sensibly changing its form. The finger being gently pressed on either eyelid, is drawn over the eyeball parallel to its surface. The consequence is that *the change in the apparent position of the* flame *is much greater than* that which results from the most *violent pressure.* Such a result is wholly inexplicable by Sir David Brewster's hypothesis of change of figure; but is precisely what might be expected if apparent direction is changed by moving the image on the retina, and if pressure on the eyeball produces that change of locality in the image. The hypothetical virtues of radii, perpendiculars, and the "centre of visible direction," find no support in this experiment.

The experiment may be varied in the following manner, so as to dispense with the two images of the candle, and yet lead to the same conclusion. Shut one eye, and rotate the open eye with the finger in the manner above described. Then all objects will appear to move in the direction opposite to that in which the eye is rolled; in the same manner and for the same reason, that the supernumerary flame did in the preceding experiment. For example, if the right eye is rolled to the left, the panorama of the field of vision moves to the right, for the images are formed farther to the left, like those of objects situated farther to the right. A similar, though less effect is produced by strong pressure. I find that pressure towards the left produces apparent motion towards the right, and vice versâ. This confirms the conclusion, that the effect of pressure depends upon the rotation it occasions. To establish this still more conclusively, I direct the pressure more and more backwards, and find the effect diminished; and when by pressing simultaneously over different points of the eyeball, I produce a resultant force almost directly backwards in the direction of the axis, I find the apparent motion of objects reduced nearly to zero. This is precisely what should take place, if the illusion results from a change in the location of the image, but is entirely different from what should take place if it resulted from a temporary oblateness of the eyeball, and a consequent change in the direction of the radii.

It is hardly necessary to add, that every change in the location of the image is not attended with a perception of motion of the object. Whenever this motion of the image is occasioned by a voluntary motion of the eye, the head, or the whole body, we are conscious of the motion of the organ or of our body, and attribute the change of sensation to its true cause: in the ordinary rotation of the eye, objects which are with respect to us actually stationary, appear so. But when a change in the location of the image results from motions of the eye not produced by the muscles which ordinarily produce it—as for example when the eye is rotated by the finger—we attribute the motion to the object. With this rotation—as in the experiment before described—the object appears to move; yet according to the law of visible direction, there should be no apparent motion. The law is thus transgressed by nature, and is therefore no law. The concession before made in regard to its approximate truth, applied only to ordinary vision. If the eyeball is, by means of the finger, rotated to the left, then the perpendicular drawn from the image on the retina is not directed to the apparent place of the object, but passes it on the left side. Experiment appears to me to overturn this "law of visible direction," considered as a statement of the direction in which objects actually and in all cases appear. The perpendiculars—however nearly coincident with the axes of the pencils—have no inherent power, as perpendiculars, to control our judgment in regard to direction. But if this law were true in point of fact, it would still afford no explanation of apparent direction or erect vision.

New York, Sept. 30*th*, 1845.

Art. V.—*On the Cause of Disorder in Pregnancy.* By John H. Shearman, M. D., of New York.

The notoriety of disorder, in some shape or other, in almost every case of pregnancy, and the long catalogue of disorders of pregnant women which has been accumulated by the observation and industry of obstetric practitioners, render any proof of the assumed fact unnecessary.

The history of ages has been collected—the most refined distinction, analysis, and classification of symptoms have been achieved—remedies and preventives have been copiously suggested, until every symptom as well as malady is provided for; but the *cause* of disorder is still left unexplored. The action of the gravid uterus on the rest of the body, or the sympathy of the body with the uterus, being the only explanation attempted or expected.

But why should the process of gestation occasion disorder? Is not the process a natural one? Why should not a man suffer from the process of generating, as well as a woman from gestating? The woman is formed for the purpose of breeding and bearing children, and the whole of her life tends toward that, as the aim and end of her existence. Gestation is not to be considered as disease. The reproduction of our species is not a foreign process. Why then should the body be disordered, and be said to sympathize with the uterus in this condition? The common cant of evading the assignment of the true cause, by assigning some meaningless words instead, to cover our ignorance, can be of no service to us; and an honest "I don't know," is much to be preferred, to "words without knowledge, which darken counsel."

Among the other facts which have been observed, that the blood is not in its usual, or as it is called, normal condition, during pregnancy, is a fact universally admitted. The similarity of the appearance of the blood in pregnancy to that in inflammation, has long been known, and although this single but singular fact might have led some acute mind to the very heart of the mystery, yet to this day it remains unexplored—a secret and a marvel. Indeed, the uterus has for ages been regarded with a degree of superstition, as capable of doing many marvellous things, and in the opinion of the million, medical as well as non-medical, performs wonders much greater than bringing forth men. It is supposed to be capable of altering the whole condition of the body, as in cases of chlorosis and hysteria; and so potent is the uterus considered to be in the matter of health or disease, that hardly any medical man attends a female patient, without conscientiously inquiring into the condition of the uterus and its functions; nor would any patient consider herself properly attended, without such inquiry.

The condition of the uterus in pregnancy, from the moment of conception to that of birth, has been very ably examined, and all that relates to anatomical and physiological states has been most minutely investigated, by men whose names are immortalized in the annals of anatomy. Ruysch, Harvey, Haller, the Hunters, Home, and a hundred others, have ably explored these fields of science: but the cause of all the morbid phenomena of pregnancy seems to have escaped investigation, as if the process of gestation were a secret out of the reach of man.

I have already observed, that it is a well-known fact, that the blood is not in its normal state, in pregnancy. But why is this? What is there in the process of gestation to alter the condition of the blood? The answer to this is the key to the whole question. What is done with the blood in the uterus during gestation causes the whole of the phenomena. It has been usual to consider the state of gestation, as one which is like to that of inflammation, because of the exhibition of the buffy coat of the blood; and since inflammation precedes, and sometimes appears to accompany the process of reparation in cases of injury, the reformation of a part, and the reproduction of a being, have both been set down as results of the process denominated inflammation.

However, inflammation is invariably the result of interrupted nutrition; or, if some will have it so, the cause of it; but whichever way the theorists might decide with regard to inflammation, it can never be the cause of reproduction. Let any man venture to carry out the theory, even on paper, "Gestation, an inflammatory process of the Uterus," and see what he will do. In the meantime, let us endeavor to trace out as well and as far as we can, what takes place in the process of gestation, and ascertain what effects would be likely to follow such process.

No sooner is the semen deposited in the uterus, than there is a process of formation set up. The membranes in which the ovum is enveloped, and the placenta by which it is nourished, have to be formed, and this process necessarily diminishes the quantity, as well as deteriorates the quality of the blood in general circulation. However, as the membranes and placenta are composed of the usual elements of the body, there is little, if any, change in the condition of the blood, and but trifling disturbance while this process is commencing; but as the fœtus begins to be developed, there is more or less of disturbance, so that in some cases death itself is occasioned.

It is allowed, that the first stage of the process consists in the deposition or formation of serous and albuminous matter, in which the fœtus is to be developed. These fluids contain considerable quantities of the alkaline and acid constituents of animal substances, and when subtracted from the general mass of the blood, must to a certain extent alter its chemical condition. The animal alkalies and acids, which are the result of animal chemistry, may be formed out of the elements of the blood, without inconvenience to the rest of the body: but the mineral acids, alkalies, and other substances which are secreted to form these depositions, can be procured only by fresh substances taken into the body. Phosphorus, chlorine, sulphur, lime, soda, potash, magnesia, silica, iron, manganese, &c., can be procured only from outward sources; and when withdrawn from the general mass of blood, and not replaced, must of necessity cause considerable change in its condition.

The next stage in the process of gestation consists in the further development of the fœtus, now the nidus for it has been prepared; and the fœtus is at first, principally, serous, albuminous, and gelatinous; in all of which, the saline and mineral compositions of the body most abound; and of course this process occasions a considerable draught upon the whole quantity of the blood. As the fœtus becomes developed, the bones require large quantities of lime and phosphoric acid, which will be fetched from the composition of the substance of the mother, if not found in sufficient quantity in the blood; so that the draught upon the peculiar elements which are required for the growth and perfection of the fœtus, if not supplied exactly in the same proportions as those in which they are abstracted, causes a defection in the constituent elements of the mother.

Not only is the quality of the blood of the mother liable to be altered by the development of the fœtus, but the quantity to be seriously and even formidably diminished. The growth of the fœtus in the course of nine months, being from a grain to eight or ten pounds, the principal quantity of which is produced during the last three months, must necessarily abstract largely from the whole quantity of the blood; and quantity as well as quality of blood is one of the elements of health. If the daily abstraction of quantity as well as quality from the blood, could be daily repaired, there would little disorder happen; but as the condition of the fœtus is absolute, requiring to be perfected in a certain time—admitting of no delay, and permitting no lack of supply of requisite materials; and as the condition of the mother, from external circumstances, or from improper management or conduct, may be unfitted for the process which is going on, much disorder and misery may occur.

If the disorders of pregnancy be owing to the causes which I have pointed out, then they would be likely to occur when these causes have been operating for the longest periods of time, most uninterruptedly; and this appears to be most undoubtedly the case. The night, especially during sleep, is the time when most nutrition is performed. The fœtus must therefore grow more by night than by day, and consequently draw most copiously on the blood at that time. The morning necessarily will be the time, contrary to the usual course of other ailments, when the pregnant woman will experience most inconvenience. Then it is usually, that her languor, head-ache, nausea, and vomiting come on, and the thousand and one ailments of her condition press most heavily upon her.

The appetites and longings of women in pregnancy are indubitable proofs of disordered blood; for, if we knew rightly how to trace effects to their causes, we should find, that the substances for which they long, contain the elements in which their blood is defective. Thus if a woman have a longing for cabbage, greens, radishes, or any species of the Brassica, we may know that sulphur and phosphorus, and most probably hydrogen and nitrogen, are deficient. If she have longing for fish, we may conclude that gelatine and phosphorus are deficient. If she long for carbon in any shape, it is needed to neutralize the nitrogen and hydrogen in excess—and if she long for lime and magnesia, they are defective. In these matters, physiological observers have done little more than recount the fancies of gestating women, and leave them to the pity or ridicule of medical men. "As fanciful as a pregnant woman," is an old standing proverb.

But perhaps the altered state of the blood may be admitted, without conceding that the different condition of the blood causes the disorders in question. Yet, will any one point to a disease or disorder of any kind, which does not depend on an altered condition of the blood? What fever does not depend on the state of the blood? What inflammation, spasm, or nervous affection, tooth-ache or ear-ache, but is attended with some disordered condition of the blood, either in the whole quantity or some part? How does the bite of insects and venomous animals affect us? Is not the condition of the blood in the part changed immediately, and in some instances the whole mass of blood altered? Moses asserted that the life was in the blood, and Hippocrates, Harvey and Hunter, have proved it. When the mode of life is altered, the condition of the blood is changed. In ease and health the condition of the blood is natural. In pain and disorder the blood is unnatural. It is on this principle that the whole of the phenomena of poisoning are accounted for—and on this principle is the whole theory of medicine founded: for all medicine, and all food, and all treatment of every description, act on, and through the blood.

We have then a fine field of observation thrown open to us in the investigation of the condition of the blood of gestating women, and the chemical nature of the food which they desire. Indeed, the food which we take, as well as the food which we desire, admits and requires the nicest and most thorough investigation. Such as our food is, such is our blood; and although it follows that what we desire for food we ought to have, to keep us as we are; yet it does not follow that we ought to be what we are, nor therefore that we ought to take the food which we take.

Too much care cannot be exercised with regard to the substances taken into the body by pregnant women. The smallest quantity of a substance which is not wanted in the body, may produce most distressing consequences. How appalling to think of the quantities of substances in the shape of medicine, which pregnant women take. Salts, senna, sulphur, castor-oil, aloes, rhubarb, colocynth, magnesia, soda, ammonia, iron, zinc, mercury, silver; with a multitude of others, after the art of the apothecary. If one thing will not do, try another; as if the human body were to be kept together, as well as kept going, by the apothecary's art. The stomach must be kept right, and the bowels kept right by the "medicine man." Nor does the spell-man nor incantation-man hold in more complete unnatural and superstitious thraldom, the unenlightened Indians and Barbarians, than the ignorant drugger holds the civilized races of man.

But there is another cause of the disorders of pregnancy to which we must advert, which operates in the same way. As a woman has to support another being beside herself, she must necessarily take in a larger supply of food, and make a greater quantity of blood than she did before pregnancy. For this purpose, the whole of the circulation must be augmented, or quickened, or both, and not only the ingesta, but the egesta, be increased. A pregnant woman is a larger woman in every sense of the word, than she was before pregnancy, and her secretions and excretions must necessarily be increased. If these be improperly retained, there is the same result produced as if too much be taken away: for the blood, the solids and the fluids, must be of the normal condition, to produce health.

There need be no doubt of the requisite arrangements for these conditions in every woman who is completely formed—for every thing and being in nature is adapted to its use and end. The doubt is, whether the arrangements of society are adapted to the condition of women in such circumstances. Close, tight, hot, and cumbersome clothing—the greater portion of the skin excluded from light, air, and water—soft, close, heating beds—close, unventilated rooms, unnaturally heated—little or no exercise—food of an unsuitable nature, improperly administered in quality and time—long sitting at one time, and in one place, particularly when crowded and heated—remaining up at the most suitable time for repose—and remaining abed at the most suitable time for rising—and all the other unnatural modes and habits of towns and cities, interfere most terribly with the natural, healthy condition of woman particularly. They modify the condition of the blood, the appetite, digestion, nutrition, secretion, excretion, and all the functions of life. Tight lacing prevents the due performance of respiration, because it diminishes the space for the lungs—it hinders digestion, because of the compressed state of the stomach and neighboring vessels—and it obstructs the assimilating and separating process of the intestines, because they have not room for sufficient peristaltic motion—the functions of the kidney and bladder are hindered, because of the obstructed circulation in their tissues, and the uterus is kept down, and the neighboring parts obliged to offer great resistance to its enlargement and elevation. Yet who will go without corsets to save her health? They are, from custom, as requisite to support and existence, as ale, wine, and spirits are, to those who take them habitually—but no more.

Women in a state of nature, or, if it be thought more proper, in a wild state, suffer remarkably less in pregnancy and labor, than women in civilized life. Their functions are less interrupted, and they have better health. They breed and bear with an ease which fashionably educated women know nothing of. Their food is more simple—they have little or no medicine, and their dress, if not so elegant, may be as serviceable. They have more to do with light, air, and water, are better fitted to the elements in which they live, and are a large and important proof to us, that pregnancy, when it has fair play, occasions little disorder.

The principal reason to be assigned, why some women in civilized life, differ so much from others, in their condition in pregnancy, is, that they have better general health, or manage themselves better than others: and those who live in the most simple style, and the nearest to the requirements of nature, are invariably in the best health.

It is not my purpose, in this paper, to allude to the mechanical causes of disorder in pregnancy—as that is amply performed by others more competent than myself; nor can I enter into the details of treatment and management of the disorders of pregnancy. It is enough at one time, to point out the cause, or even the direction in which the cause lies, and turn the attention to the investigation of the subject. But there are a few remarks requisite on the menses and the milk, which will serve to illustrate and confirm what I have advanced.

The menses are a periodical accumulation of discharge from the uterus, evidently keeping up the aptitude for the function of pregnancy; and when they are defective, interrupted, or irregular, there is either local or general disorder preceding such disturbance. The retention of the menses, or rather non-secernment of them, is mostly the effect of a peculiar condition of the blood, not the cause of it. Delicate women, of a spare habit of body, have usually a large quantity of this peculiar secretion. This is in consequence of the little vigor of the organs of the body, and therefore only a small supply of blood is required, and there is much to be thrown off. Robust and vigorous women have less secretion, as there is less superfluous blood—almost all being required for use. But little or much, the secretion is for the purpose of habituating women to nourish another being beside themselves. Accordingly, when women are no longer fitted for the purpose of supporting and producing offspring, this secretion ceases.

During each period that pregnancy occurs, the breasts are enlarged, and there is a tendency to the secretion of milk—but there is rarely any milk actually secreted, until the birth of the child Then, the milk begins to flow freely enough for its sustenance. The body having been accustomed for some time to nourish a parasitic being, has acquired a capacity for this function: and the child no longer receiving its supply from the uterus, is now furnished with it at the breast. The blood which was previously employed to sustain the child in the uterus, is now employed to secrete the milk in the breasts. This function of sustaining another being, increases after the birth of the child—for the infant requires more nourishment progressively after the birth than before, and yet the mother is usually capable of supplying all the wants of her infant, for nearly the first year.

Now in the case of the menses, and the milk, as they are both supplied from the blood, and therefore are secretions, and must necessarily draw largely on the blood, especially the milk—if that portion of the blood which they abstract, is not constantly supplied, how soon the woman falls into disorder. After the principal flow of menses, women are often much exhausted—and after a night's suckling, how many women vomit and faint, and suffer as much as during pregnancy. In both these cases, the blood of the woman has been materially altered, both in quality and quantity; and hence the symptoms of disorder which occur.

The more simple the causes of phenomena, the more easy of management are they. If the principal disorders of pregnancy are produced by the condition of the blood—and that condition depends simply upon what is put into and taken out of the blood—and if the nature of the food modifies the nature of the blood, it may be reasonably hoped, that a more thorough acquaintance with the nature of food will enable us to avoid or palliate much of the sufferings of pregnancy. In cases of poverty, where the supply of food is unsuitable and insufficient, no art or science can supply the want of it—nor will any medicinal treatment be of use, except such as may tend to restore the blood to its proper condition.

ART. VI.—*Bloody Tumor of the Mamma.* By STEPHEN W. WILLIAMS, M.D., of Deerfield, Massachusetts.

THE following case appears to me to be somewhat singular, and, so far as my observation goes, a precisely similar one is not described in any of our books. I have in vain looked for a parallel case in any of our works on surgery which have been published within the last half century; or in any of our medical periodicals which have issued from the press within that period, although I have examined nearly all the American journals, and several European periodicals since the commencement of the year 1800, in strict reference to this case; but, as yet, I can find none which compares with it in all its particulars. I care but little about the names of diseases, yet as it differs from the common encysted tumor of the breast, I have ventured to call this a case of bloody, or sanguineous tumor of the Mamma. I do not find this name or disease in Sir Astley Cooper's great work upon diseases and tumors of the female breast, or in the splendid work of our distinguished countryman, Dr. John C. Warren, on tumors. I may have overlooked it in my researches, and it may have occurred in the practice of other individuals, and this communication may be the means of drawing forth further remarks, and perhaps cases, of a similar character. Facts and practical remarks in our profession are of vastly greater importance than theory and speculation.

Case.—In the month of June, 1841, Miss E. G., of North Heath, in the county of Franklin, in this State, aged thirty-nine, applied to me for advice and assistance in the case of enlargement of one of her breasts. For six years before, she had been confined to her bed, or, as the common expression is, had been bed-ridden, by prolapsus uteri, and leucorrhœa.

About a year before, she discovered a small, but perfectly smooth tumor in her left breast, rather hard, but not painful. Dr. Emerson, of Heath, saw it about this time, and advised the use of discutients. She continued the use of them nearly a year, during which time the tumor continued to enlarge. She had an occasional slight discharge of blood from her nipple. Her physician thought her case might ultimately prove cancerous, and about this time she placed herself under my care. The tumor now appeared to be about the size of a pint bowl, and fluctuating, but the skin was not discolored in any part of it. She was of the nervous temperament, and her general health was not good. I put her upon the internal use of the sesqui-ioduret of iron in the form of syrup, from twelve to twenty-five drops three times a day, and upon the external use of the ointment of hydriodate of potash, half a drachm to an ounce of lard. The use of these for about a month produced no diminution in the size of the tumor, when I proposed a puncturation with a fine cambric needle, for the purpose of ascertaining the appearance of the fluid contained within the breast. A few drops of sanguineous matter followed the punctures, which satisfied me that the tumor was filled with the same kind of matter. I was then induced to introduce a lancet, and evacuate the contents of the tumor, and if it again filled, to resort to other measures. I drew off nearly half a pint of thin serous matter, which at the time did not smell very offensively, but on keeping it a few days in a bottle, the smell of putridity was horrible, but it never coagulated. The patient was thrown into convulsions by the operation, but by the use of diffusible stimuli, friction, &c., she recovered in the course of two or three hours. The tumor again pretty rapidly filled, when I recommended the introduction of a *small seton* through the breast. She consented to the operation, and in the month of September following, I visited her at Heath, and passed such a needle through the tumor, from the upper to the lower part of it, as is used for hydrocele by seton, and drew about half a dozen threads of brown linen through it. But little blood followed the incisions of the needle. The patient was thrown into convulsions as before, and was restored in a few hours by the same means. The seton produced a great deal of irritation, but it was suffered to remain in the breast for several months, when I directed it to be removed, when it speedily healed and the patient felt nothing more of the tumor for more than three years, and her general health greatly improved. Within a few months I accidentally heard that about six or eight months ago the breast again enlarged, but could never learn distinctly any of the particulars, as she has not again called upon me. During much of the time of treatment she continued the use of the syrup of the sesqui-ioduret of iron, which I now prepare, and also the syrup of the iodide of iron, and am using them somewhat freely in scrofulous and cathartic affections.

What led me to the use of the seton, as described in the history of the above case, was my knowledge of the fact of its having been successfully employed in a case of encystic tumor of the neck, nearly of the size of a pint bowl, and which had been of about two years standing. I was called in consultation in the case, with several other physicians. The tumor was directly over the carotid artery, and the complaint was mistaken by some of the gentlemen of the council for carotid aneurism, or it was apprehended that that might be the difficulty. It was thought advisable, however, before resorting to the operation of tying the carotid artery, to make a small incision into the tumor, and ascertain the nature of the contents of it. It was accordingly done, and a small quantity of muco-purulent matter followed the incision. A seton was then drawn through the tumor, and in the process of time it subsided, and the patient was ultimately cured.

Another case, too, had considerable influence in forming my decision in relation to the use of the seton in this instance. It was that of ganglion on one of the tendons of the wrist. It resisted every method of treatment which had been resorted to before the introduction of the seton. It had become considerably larger than a hen's egg, and by pressure upon it the fluid would pass beneath the capsular ligament of the wrist, and fill the palm of the hand. At this juncture two issues were made upon the tumor which penetrated into the sac, and produced a good deal of constitutional irritation. They did not entirely cure the complaint, and some time after the irritation subsided, I introduced a seton through the tumor which I suffered to remain in it two or three months, when I removed it, and healed the orifices occasioned by it. The ganglion was cured, and the patient suffered but very little irritation from the seton. I am now aware that serious fatal results have sometimes followed the application of the seton in cases of large ganglia of the tendons, but I was not aware of this fact before I introduced the seton in the case of this patient; and although we have high authority for the use of it in these cases, yet it would only be a *dernier ressort* with me when the patient should refuse to submit to other operations.

ART. VII.—*Experiments illustrating the Seat of Volition in the Alligator, or Crocodilus Lucius of Cuvier.*[*] By JOHN LE CONTE, M. D., of Savannah, Georgia.

HAVING frequently had occasion, during my boyhood, to witness the extraordinary tenacity of life manifested by this reptile when seriously mutilated, and my attention having been powerfully fixed on the suitable and determinate movements which it exhibits after decapitation, the following experiments were instituted, with the view of obtaining clearer ideas on the subject:

On the 10th of March, 1845, with the assistance of my friends Drs. J. F. Posey, J. S. Morel, J. B. Tufts, and two unprofessional gentlemen,

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[*] The substance of this paper was read before the Georgia Medical Society, at Savannah, on the 7th of August, 1845.

I performed the following experiments on a young Alligator (*Crocodilus Lucius, Cuv.*) 2 feet 8 inches long. The animal being well secured, decollation was effected at the articulation of the atlas with the occiput. Not more than two ounces of blood flowed from the wound. Experiments were made upon the head—the jaws snapped at anything which touched the teeth, tongue, or lining membrane of the mouth. After the violent convulsive motions produced by decapitation had subsided, the trunk of the animal remained in a state of torpor resembling profound sleep. But, when pricked or pinched on the sides, he would scratch the spot, sometimes with the anterior and sometimes with the posterior extremity, according to the situation of the injury inflicted. These movements of the limbs were promptly and determinately performed, and were always confined to the members on the side of the irritating cause. If touched below the posterior extremity, on the thick portion of the tail, he would slowly and deliberately draw up the hind foot and scratch the part, and would use considerable force in pushing aside the offending object. These experiments were repeatedly performed, and always with the same results—the animal invariably manifesting slow and determinate movements, accurately directed to some particular spot for a definite purpose.

Conjecturing that a portion of the *Medulla oblongata* remaining in the upper part of the vertebral canal, might give rise to these exhibitions of apparent sensation and volition, I introduced an iron wire 0·10 of an inch in diameter, with the point reduced to a cutting edge, for the purpose of avoiding compression of the medullary matter in forcing it downwards, into the cervical extremity of the spinal marrow. As soon as the instrument penetrated the canal, violent spasmodic motions supervened—the anterior extremities were forcibly pressed against the table, while the posterior were extended backwards, downwards and outwards, as in ordinary locomotion. These subsided in a few moments, and the animal relapsed into its former state of dreamy torpor. The experiments in pricking and scratching were now repeated, with precisely the same results; excepting that the torpor appeared to be more profound, requiring a longer application of the exciting cause to produce the movements. These motions were never spasmodic or convulsive; they were slowly and deliberately performed. The wire was cautiously forced down the spine at intervals, giving time to repeat the experiments in sensation and volition, at every stage of its progress downwards. Any movement of the instrument produced convulsive motions of the extremities, lasting, however, only a few seconds after its progress was arrested—the limbs which before were flexed, were, at this stage of the experiments, suddenly and forcibly extended—they remained for some time fixed parallel to one another, and to the axis of the trunk, and then gradually relaxed. The same phenomena in motion were manifested upon the application of an irritant, until the point of the wire passed the roots of the nerves supplying the anterior extremities, when they were instantly paralyzed, and, of course, ceased to indicate any power of moving. However, the posterior members continued to exhibit the same phenomena, more or less conspicuously, while the instrument traversed the whole length of the spinal canal, even to the origin of the nerves supplying the hind-feet. At this point, all determinate motion ceased; or, at least, we had no means of ascertaining its character, for all of the limbs were now paralyzed, although the tail still continued to move slightly when irritated. Towards the close of these experiments the lethargic state became more and more profound, the animal was plunged in a sleep resembling coma, and it was very difficult to arouse him sufficiently to indicate the character of the motions. Smart taps of a riding-whip over the fleshy part of the tail, quickly repeated, or the constant srcatching the same part with the finger nails, were found to be the most effectual methods of eliciting these determinate motions. These movements were not convulsive or sudden, and were only manifested by the foot on the side of the irritant. The experiments occupied about one hour.

Remarks.—D'Alembert has well designated the space which lies between geometry and metaphysics, "*L'abîme des incertitudes et le théâtre des découvertes.*" In the present state of our knowledge the science of the nervous functions occupies a remarkable part of this wide intellectual domain, forming a sort of neutral ground between the strictly physical sciences—those which deal with matter in its various forms, and those which have relation to the phenomena of mental existence. Physiological researches irresistibly lead us almost beyond the frontiers of the material world into the region of sensation and perception, thought and will. We pass from physics to metaphysics, from the body to the soul, from physical phenomena to those that are hyperphysical, from those that are mechanical and chemical to those which are hyper-mechanical and hyper-chemical, from biology to psychology, from things to persons, from nouns to pronouns. It is this proximity to the borders of metaphysics which has thrown around the subject so much ambiguity and obscurity. The chasm which intervenes between matter and motion on the one side, and thought and feeling on the other, is brought into view by such investigations; but none of the numerous hypotheses which have been broached can effectually bridge it over. We labor in vain to follow physical analogies in illustrating the operations of will and thought, when they have nothing in common, excepting a conventional and metaphorical phraseology borrowed from the world of matter.

That external impressions upon the nerves are all conveyed to one internal organ, the encephalon; and that from this organ all impressions of the will appear to proceed; and that thus the brain is the centre of animal life, towards which sensations converge, and from which volitions diverge,—is a doctrine distinctly maintained by Herophilus, and Erasistratus, as well as by Galen, and his successors. Later researches have confirmed this grand physiological law, so far as it is applicable to man and the higher vertebrata; but in many of the inferior orders of animals, we find that isolated portions of the spinal cord perform functions analogous to those of the encephalon; receiving impressions which are followed by contractions of those very same muscles, which, while the brain maintained its integrity, obeyed the determinations of the will, and produced regular and methodical movements directed to the removal of the cause of injury. The question now arises, whether these indications of sensorial powers are accompanied by actual feeling and volition; or whether they exist only in appearance, and without any real consciousness on the part of the individual percipient being. The solution of this problem involves that of another, equally obscure; namely, as to the locality and extent of the *sensorium* in all the classes of the animal kingdom.

Great confusion has been introduced into this subject by the inaccurate language employed by physiologists in theorizing on these phenomena; and particularly in generalizing the idea of sensibility to such a degree, as to give that appellation to every nervous coöperation accompanied with motion, even when the animal had no perception of it, when not characterized by attendant consciousness. Many eminent writers have deceived themselves to such an extent by the employment of these figurative and ambiguous expressions, that they thought they had explained phenomena, when in fact they had only translated the phraseology of them into metaphorical language; and have thus fallen into that kind of sophism designated by logicians under the name of syllogism of four terms. Some physiologists have likewise spoken of a sensation without consciousness; but later writers have considered it desirable to restrict the term sensation to the consciousness of an impression.

With regard to the seat of the *sensorium commune*, or nervous centre of volition and sensation, much discrepancy of opinion has arisen among the most distinguished modern physiologists. A majority of them agree in assigning this function, at least in the higher vertebrata, to some portion of the encephalon. Similar contrariety exists in the experiments, regarding the particular parts of the encephalon, that are concerned in voluntary movements. Dr. W. B. Carpenter appears to confine the power of originating voluntary actions exclusively to the cerebrum (vide Principles of Human Physiology, 1st Am. edit., Philad., 1843, pp. 200 et 208, paragraphs 279 et 288). This opinion is directly at variance with the experiments of several eminent continental physiologists. Thus the vivisections of MM. Flourens and Bouillaud seem to show, that the cerebral lobes are not the exclusive receptacle of intelligence, of instincts and volition; for to admit this proposition would be to grant that an animal which retains the power of locomotion—which makes every effort to escape from irritation—which preserves its appropriate attitude, and executes the same movements after as before mutilation, may perform all those actions without the agency of the will. The power of effecting regular and combined movements, on external stimulation, evidently survives the destruction of the cerebral hemispheres (vide Report on the Physiology of the Nervous System, by William Charles Henry, M.D., in Dunglison's American Med. Library, in volume of Med. and Surg. Monographs, Philad., 1840, p. 268). Prof. Adelon maintains most unequivocally that volition is exclusively restricted to the encephalon, without designating, however, in what portion of the brain it originates (vide Article *Encephale* (Physiol.) in *Dict. de Méd.*, tom. 7—Paris, 1823). MM. Faville and Pinel Grandchamp thought that the *cerebellum* is the seat of sensibility; but the experiments of MM. Rolando, Flourens, Magendie, Schoeps, and Hertwig, demonstrate that sensation continues even after the entire removal of this portion of the encephalon. From the researches of MM. Magendie, Flourens, and Desmaulins, it results that even the total ablation of the cerebral hemispheres and the cerebellum does not deprive an animal of sensation, and that when thus mutilated, it is still capable of executing regular movements. For example, M. Magendie has repeatedly seen hedgehogs and guinea-pigs, in which he had extirpated both cerebrum and cerebellum, rub their nose with their paws, when a bottle of strong acetic acid was held to it (vide "*Précis Elémentaire*," 2d edit., tom. 1, p. 340—Paris, 1823). Anencephalous monsters have also been known to perform voluntary movements.

Prof. I. Müller places the seat of sensation and volition in the brain. He compares the primitive fibres of all the voluntary nerves spread out at their central extremity in the encephalon to receive the influence of the will, to the keys of a pianoforte, on which our thoughts play or strike, and thus give rise to vibrations of the nervous principle in a certain number of elementary fibres, and consequently to motions. The mind is the performer or excitor; the primitive fibres of all the nerves which expand out in the brain, are the strings; and their cerebral extremities, the keys. In another place, he more explicitly designates the medulla oblongata as the source of all voluntary movements: where, the fibres of all the motor, cerebral, and spinal nerves may be imagined as spread out, and exposed to the influence of the will, like the keys of a pianoforte. (Vide Elements of Physiology, Am. Ed., by John Bell, M.D., Philad. 1843, pp. 535, 607, 621, 674.) From these conflicting opinions, it is obviously impossible to eliminate anything categorical, respecting the special seat of volition. It seems to be tolerably well established, however, that the seat of the sensorium is not restricted exclusively to one spot in the encephalon; and that, in the higher animals, the cerebrum, cerebellum, and medulla oblongata appear to possess the faculty of acting primordially and spontaneously. (Vide Henry's Report, cit. *supra*, pp. 274 et 290.) Whether this function appertains to the spinal cord in reptiles and the lower classes of animals, is a problem which can only be resolved by cautiously-conducted experiments: *à priori* reasoning only serves to involve the subject in impenetrable mystery. Deductions drawn from the analogies of the phenomena exhibited by man and the higher animals, can avail us but little, when we observe, that reptiles, after decapitation, manifest endowments which the former do not display under the same circumstances. Some physiologists, while they maintain that volition is seated in the encephalon, nevertheless admit, that an analogous function may extend over the whole cerebro-spinal axis. In deciding a question absolutely, no half results, no approximatives are sufficient: if sensation and volition are functions of the spinal cord in the lower vertebrata, experiment should give us unequivocal indications of it.

The larger Sauria are peculiarly adapted for such experiments. These animals possess an obvious development of the cerebellic lobes as well as the cerebral hemispheres: they are remarkably tenacious of life, and long survive the destruction of the brain. The free and unrestrained condition of their limbs render them preferable to the Chelonia, for the purpose of testing the volitional character of their movements. It is manifest that no inference—on a question of this kind—could be drawn from experiments performed on the Ophidia and other apodal reptiles: for it would be impossible to determine whether the motions exhibited, are prompted by design and regulated by determinate motives.

It would be difficult to imagine that the decapitated Alligator, in the experiments which I have recorded above, could have performed all of those movements, had it been totally devoid of sensation and consciousness. His motions appear to have been performed with a perfect knowledge of the end in view; they were directed peculiarly to that end; they varied according as the conditions in which they were elicited altered, and the alteration made was always so contrived as to suit the variation in the circumstances. It is true we cannot communicate with animals, and ascertain from them, as we do from our fellow men, whether their motions are, under any circumstances, prompted by a distinct and conscious effort of volition. Nevertheless, by varying our observations on them in new and arbitrary combinations of circumstances, we can reduce the chances of error to a very small amount, and render our inferences as highly probable as are most of the propositions of contingent truth. Now the question arises, can all such definite and co-ordinate motions be referred to any other cause than a volition resulting from the consciousness of an impression?

Pathology as well as therapeutics has, doubtless, been vastly enriched by the researches of Dr. Marshall Hall, Prof. J. Müller, and others, respecting the excito-motory phenomena of the spinal system, which have, likewise, resulted in some of the most brilliant discoveries in physiology. But it may be questioned whether they have thrown much light upon the locality of the *sensorium commune*, or have contributed, in any appreciable degree, to fix with clearness and precision in the minds of physiologists, an obvious distinction between the voluntary and reflex motions. It is assumed that the former are always attended with perception and consciousness, while the latter take place without the intervention of sensation. Admitting this distinction, the question recurs, how are we to determine whether any given motion is the product of a conscious act of volition, or merely the result of an involuntary reflex action? Manifestly, in the case of animals, only by varied experiments—by placing them in circumstances which will test the existence of a volent power.

Dr. Marshall Hall distinguishes the motions which belong to the sentient and voluntary system, from those appertaining to the excito-motory by the circumstance that the former are frequently spontaneous, while the latter are always excited. (Vide Lectures on the Nervous System and its Diseases. Am. Ed., Philad., 1836, pp. 24, 29 et 30. Paragraphs 16, 29, 30 and 35.) This distinction is extremely vague and unsatisfactory. For it must be recollected that voluntary motions are not necessarily spontaneous; they are frequently called into action by external irritation:—and hence it would be a miserable *non-sequitur* to infer that movements which are excited, which supervene upon the application of stimuli, are always unattended with sensation and consciousness. Even if it be granted, as Dr. Hall asserts, that decapitated animals originate no self-dependent motions, his conclusion would still be unsatisfactory, viz., that reflex motions are always accomplished without the co-operation of mind. If it be denied that reflected movements proceed from sensations, assuredly the discontinuance of the one cannot prove the absence of the other. It therefore follows, that the want of spontaneity of motion is not a good criterion of the non-existence of the sensori-volitional power.

Dr. William B. Carpenter contends that adaptiveness in muscular movements excited by external stimuli, is no proof that they are performed in obedience to sensation and volition; since many of the purely instinctive actions, which are manifestly performed without any effort of the will; as, for example, the act of deglutition, the contractions of the alimentary canal, heart, &c.; are, nevertheless, perfectly adapted to a given purpose. (Principles of Human Physicians. Ed. cit. *ante*, pp. 91 and 336. Paragraphs 106 and 130.) Every physiologist must admit that, on all vital actions, the character of adaptiveness is impressed; indeed, it is involved in our fundamental conception of organization:—yet all the vital functions do not proceed from the mind. It will be remarked, however, that the involuntary or instinctive motions are peculiar in this; that they invariably act in the same way—they appear to depend upon mechanical relations—they are intended to subserve some definite purpose in the animal economy, and no other—they do not vary with the variation of external conditions—they are not capable of being modified to any extent by the will of the animal. Adaptiveness of movements to some definite end, is, therefore, only an index of the persistence of volition, when the alteration of conditions elicits a respondent variation in the action, perfectly adapted to the new circumstances. When motions are thus regulated and directed, it is hardly possible to imagine that the phenomena are purely physical—it can scarcely be denied that they are governed by a conscious mind and a presiding will. The movements manifested by the decapitated Alligator, in the experiments which I have detailed, appeared to partake of this volitional character; the animal seemed to know, to intend, and to accomplish its definite object.

It is true that an animal thus mutilated, assumes a torpid air; that he neither himself originates an act of volition, nor performs any spontaneous movement; but when he is stricken or wounded, he exhibits all the appearance of an animal exercising its usual functions. In the language of M. Cuvier, "Indeed he moves and acts precisely like a sleeping man; but we are far from believing that a man, while asleep, who moves himself into the most convenient positions and attitudes, is absolutely without sensations; nor does it by any means follow, because his perception of them was indistinct, and because he has retained no recollection of them, that therefore he has not experienced them." (Vide Cuvier's Report to the Academy of Sciences on the Researches of M. Flourens on the Nervous System, in Phil. Mag. and Journal, Old series, vol. 61, p. 122. London, 1823.) I am aware that some physiologists maintain, that the harmonious and co-ordinate movements exhibited by man during profound sleep, are purely reflex; that they are independent of sensation and consciousness. But a slight attention to the subject will convince us that, although all recollection of the cause of the change of attitude may have been lost in such cases, yet, that the mind is always partially aroused to a sense of consciousness at the time the position is altered. This is manifest from the fact, that an individual is invariably more or less awake under such circumstances, and he will usually respond if addressed at the proper period. Indeed, in some instances, if a sleeping man is disturbed by another person, he will not only answer interrogatories promptly and often rationally, but will sometimes make use of threats and violence; and yet he will not retain any remembrance of what has transpired. The cerebral lobes must be active in such cases.

Comparative anatomy may afford us some assistance in elucidating the locality and extent of the *sensorium* in the animated creation. Physiologists and naturalists have been unable to discover any nervous system in the lowest tribes of the radiated division of the animal kingdom. Many of the polygastrica appear to have an acute sense of taste, they distinguish, pursue, and seize their prey, they avoid impinging on each other while swimming, crowded in myriads, in a drop of water; they contract and bend their body in every direction; and they increase or retard, or cease at pleasure, their progressive motion and the vibration of their cilia, like the muscular and gangliated rotiferous animalcules; yet, nervous filaments have not been distinctly detected in their minute transparent bodies. The numerous straight parallel jaws, seen in many of the genera, are opened and closed, advanced and retracted, with great quickness and precision, and all the movements of these minute animals appear to be as regular, methodical, spontaneous, and well-directed as those of many higher animals with obvious nerves. In the pariphera, the component particles of the nervous and muscular systems have been thought to be diffused through every portion of the soft cellular tissue of the body, which possesses the same living properties in every part, and is almost indefinitely divisible without destroying its vitality. Even the reproductive gemmules of these animals vibrate their cilia with great regularity and force; they appear to be conscious of each other's approach, and can accelerate, retard, or cease their motions at pleasure; they are sensitive to light, and seem to be guided by its influence in selecting the place of attachment most suited for the growth of each species; yet they exhibit no muscular or nervous filament in the gelatinous texture of their body. (Vide Outlines of Comparative Anatomy, by Robert E. Grant, M.D., F. R. S., etc., London, 1841, pp. 181 and 182.) It is reasonable to suppose, however, from the consentaneousness of action manifested by them, that these faculties are associated with nervous filaments of such transparency and delicacy as to elude our means of research, and to prevent our detecting in these animals the rudiment of that form of the nervous system, which is seen in the wheel-animalcules, and in the higher articulated classes. But even in the obviously gangliated animals, as the asterias, every segment of the body appears equal in its character and endowments to the remainder; each has a ganglion appropriated to it; and as the ganglia, like the segments, are all alike, neither of them can be regarded as having any presiding influence. Nevertheless, Dr. Carpenter concludes from an elaborate review of the structure of the nervous system of invertebrate animals, that in them, the *cephalic ganglia*, which are the analogies of the cerebral hemispheres in the vertebrata, alone are the instruments of sensation and of voluntary power; and that when these are extirpated, all the movements which are performed are strictly reflex, and totally independent of consciousness and volition. (Vide Prize Thesis on the Physiological Inferences from the Structure of the Nervous System in the Invertebrated Animals, in Dunglison's American Med. Library—Med. and Surg. Monographs, Philad., 1840, p. 137 et seq.) Yet this ingenious physiologist admits, in a more recent production, that from the experiments of MM. Flourens, Hertwig, Magendie, and others, it appears that not only reptiles, but birds and mammalia, may survive for many months after the ablation of the whole cerebrum. He remarks that, "It is difficult to substantiate the existence in them of actual sensation; but their movements appear to be of a higher kind than those resulting from mere reflex action. One of the most remarkable phenomena in such a being, is the power of maintaining its equilibrium, which could scarcely exist without consciousness." (Vide Carpenter's Principles of Human Physiology, 1st Am. edit., Philad., 1843, p. 191, paragraph 264.)

Prof. A. W. Volkmann of Dorpat, remarked, that decapitated frogs executed movements which evinced a certain degree of harmony and adaptation, amounting to an apparent exercise of volition. He found that when a frog thus mutilated, is grasped roughly in the pectoral region, he stretches the thigh forwards, presses his feet firmly against the hand which holds him, and seeks to free himself. If a person pinches the skin on the abdomen or spine with a pair of pincers, nothing is more common than that the mutilated animal should scratch the irritated part with the hind leg of the corresponding side. It appears on the whole, as if the decapitated animal felt the operation of the stimulus, and from among various means selected the most suitable to remove the offending cause. According to M. Volkmann, the present state of our knowledge *is not* sufficient to prove that *all* the so-called reflex motions of decapitated animals, and especially amphibia, go on without the co-operation of mind, as a principle of sensation and will (vide Analysis of M. Volkmann's Paper on Reflex Motions, in the Medico-Chirurgical Review, for July, 1838, pp. 145, 148: taken from the *Archiv. Für Anatomie, Physiologie*, by Dr. I. Müller, 1838). Prof. I. Müller affirms, that he never observed such spontaneous movements of decapitated frogs, except when the head was separated close to the occiput, so as to leave a portion of the medulla oblongata in the spinal canal. When the section was made lower down on the spinal cord, the motions of the frog did not indicate the slightest degree of volition. He distinctly avows that, "We are in possession of no facts which prove that the spinal cord, when separated from the brain and medulla oblongata, can be the seat of sensation. The reflected motions excited by irritation of the surface in decapitated frogs are no proof of this; whenever these reflected movements present any degree of adaptation to a purpose, it is certain that the spinal cord has been divided at its very commencement."—(Elements of Physiology, by I. Müller, M. D., Am. edit., by John Bell, M. D., Philad., 1843, p. 602.) My experiments on the alligator appear to confirm the opinion of M. Volkmann, that the motions consequent on impressions, even after the complete destruction of the medulla oblongata, are the result of an appropriate voluntary reaction of the sensorium excited by sensation. Our difficulty lies in ascertaining what are to be regarded, in animals thus mutilated, as unequivocal indications of consciousness and volition; but the movements of this reptile seemed to participate in the peculiarities which characterize the manifestations of mind and will.

In this state of uncertainty, with regard to the deductions drawn from experiments on the inferior animals, some physiologists have appealed to certain pathological phenomena exhibited in the human subject, to prove that reflex actions are independent of sensation. Thus the interesting cases of paralysis and paraplegia, recorded by Dr. Wm. Budd in the 22d volume of the Medico-Chirurgical Transactions, clearly demonstrate, that violent retractions of the paralytic limb followed the application of stimuli, without the slightest consciousness on the part of the individual. Such movements are, without doubt, strictly reflex. They possess no resemblance to voluntary motions—they do not evince any character of determinateness and harmonious accordance. They are analogous to convulsive motions, and do not exhibit the guidance of a directing will—they are never varied to suit an alteration of circumstances. Such, I believe, is the character of all strictly reflex motions—of those which take place without the smallest influence of sensation or volition. The general spasms which are excited by touching the skin of a decapitated salamander, or by stimulus of a sensitive nerve in animals in a state of narcotization, are of this kind, and do not, in the slightest degree, resemble the phenomena of spontaneous reaction manifested in the decollated Alligator. I conceive that this distinction between voluntary and reflex actions, based upon the deliberate character of the one, and the spasmodic nature of the other, is very clear, and is highly important in determining this delicate question in physiology. In this case, some may doubt whether the true reflex motions always partake of the nature of spasms. But on this subject, we may, I conceive, with safety, adopt the decision of Prof. Wm. Whewell, deliberately given after a careful examination of the reflex phenomena. "Here," says he, "sensations (impressions) produce motions, but with no case of intervening perception or will. The sensation (impression) appears to be reflected back from the central element of animal life, in the form of a muscular contraction—but in this case the sensation (impression) is not modified or regulated by any idea. These reflected motions have no reference to relations of space or force among surrounding objects. They are blind, and involuntary, like the movements of convulsion, depending for direction and amount only on the position and circumstances of the limb itself, with its muscles. Here the centre from which the reflection takes place is merely animal, not intellectual." (Vide Whewell's Philosophy of the Inductive Sciences, vol. ii, p. 73. London, 1840.)

This is an essential distinction, and one upon which I wish to be clearly understood. It is not denied that in entire animals the reflex phenomena are frequently, nay, generally, accompanied by more or less sensation. Indeed, they are frequently modified by voluntary efforts. Such are the movements concerned in sneezing, *ejaculatio seminis*, etc.; the latter of which M. Brachet ascertained could be produced in the human subject, as well as in the dog, after sensibility and consciousness were abolished. (Carpenter's Human Phys., Ed. cit. *ante* p. 138, par. 182.) But this fact does not, by any means, render the reflex function in any way dependent for its manifestation upon sensitive reaction; neither does it destroy the strict analogy which it bears to convulsive movements. The volent faculty may modify, and, perhaps, to some extent, control the mode in which it is manifested; but when removed from such influences it must act spasmodically. In fact, if we admit that reflex action is a physical phenomenon, in contradistinction to a psychical one, if such motions result from a centripetal influence transmitted from the point of irritation to the spinal axis, which is reflected back from thence in the form of a centrifugal impulse propagated along the motor nerves; if this is done without the intervention of sensation or volition, but operating on the spinal cord, to use the expression of Prochaska, according to certain "peculiar laws written, as it were, by nature on its medullary pulp"—it is difficult to imagine, without violating all analogy in nervous action, how the movements could be otherwise than convulsive. When all control of the will is removed, the centripetal excitement resulting from the application of stimuli to the cutaneous surface, is propagated to the spinal marrow, from whence the centrifugal action irradiates to the periphery, with the rapidity of a galvanic shock along conducting wires. Here everything is mechanical, everything is purely physical, everything is strictly involuntary—nothing is intellectual, nothing indicates the guidance of an internal volent faculty. Hence the motions are convulsive—they are spasmodic. Such are the movements which are observed to follow the application of irritants to the limbs of paralytic individuals, after sensation has been destroyed or suspended by injury of the spinal cord—and such are likewise the tetanic spasms supervening from touching animals while in a state of narcotization.

Again, if purely reflex motions are produced by the transfer of a centripetal action—arising from, and originating in a local irritation of the sensitive fibres of the different nerves, to the spinal marrow, whence it is reflected back along the motor nerves;—it is clearly presumable that the *energy* of the excito-motory phenomena resulting therefrom, must be proportionate to the degree of susceptibility to irritation, and to the intensity of the impression made upon the cutaneous nerves. Yet, in my experiments on the alligator, the posterior extremity was slowly and deliberately drawn up and applied to the point of irritation, after which, considerable exertion was frequently made to remove the offending object. How is it, that the energy of the latter movement was so much greater than the former under the same stimulus, if both were nothing more than the physical manifestations of an external impression? A self-dependent internal principle must have been active in the animal.

Whatever may the cause of the suitable and determinate motions performed by the amphibia after decapitation, it is very manifest that the spinal marrow is the centre, or rather the axis, whence these movements proceed. Their character of suitableness to the attainment of a definite object, appears to indicate internal connection and harmony. The end generally shows itself in the motions, such purpose being to remove the external irritant which gives rise to them, and frequently considerable exertion is made for the accomplishment of this object. Now, the question is, are we to ascribe these phenomena to the existence of an obscure, but distinct voluntary power residing in the spinal cord? Or, are we to attribute them to a peculiar faculty or endowment of the spinal marrow, giving rise to manifestations resembling those of volition, and yet unattended with consciousness and will? In other words, are these movements guided in any way, by the mind; or do they necessarily result from certain physical conditions of the nervous system? If their adaptiveness is the result of mental guidance, then not only sensation, but judgment and volition must necessarily be involved; since it is impossible that sensation can guide to the choice of one out of many modes of action, without the exercise of these faculties. These questions cannot, perhaps, be definitively answered in the present state of physiological science.

Dr. John Wm. Arnold of Heidelberg, does not hesitate to give the spinal marrow a power to *feel* external irritants, independently of the brain and medulla oblongata, which he designates as its perceptive faculty. This power, he affirms, regards not merely the irritant in general, but also the kind, the degree, and the locality of it. But the property of perceptions connected with consciousness is wanting. M. Arnold also maintains, that the spinal marrow possesses the faculty of reacting correspondingly to excitements occasioned by impressions, and in consequence of this to perform suitable, combined, and harmonious motions; this he calls its reactive faculty. These movements are no doubt suitable and harmonious; still they want the character of freedom; they are not external manifestations of a will. To use his own language, "That which takes place in the spinal marrow during the perception of external influences, and the determination of motions following thereon, is analogous to that which takes place in the brain during conscious sensations and voluntary motions, only that clear consciousness and freedom of will are wanting to it, whilst the character of suitableness and of harmonious accordance appertains to it in the highest degree." (Vide Review of M. Arnold's work on the Theory of Reflex Function, in Medico-Chir. Rev., for Jan., 1843, p. 55.) M. Arnold does not inform us why he has invoked the assistance of a new power in the nervous system, to account for phenomena every way analogous to those resulting from the ordinary manifestations of volition. Certainly it required no greater elongation of hypothesis to suppose that the spinal cord possessed an obscure faculty of volition, than to endow it with perceptive and reactive faculties, distinct from consciousness and will. Indeed, the accordance of the former supposition with analogy, would have rendered it infinitely more rational. The theorist was obviously led astray by the employment of a new and conventional phraseology. For, according to the acknowledged acceptation of the term, perception implies a consciousness of the sensation.* By distorting the sense of words in common use, the speculator takes refuge in an abstraction so wide, that if, by it, he simplifies the phenomena, he annihilates all precise language in physiology.

It is not a warrantable distinction to say that the motions are not accompanied with sensation and volition, merely because they are not spontaneous, but are always excited by external stimuli; for I have already shown that true voluntary movements frequently originate—as during sleep—from some cause of irritation. In some cases our sensations are distinctly and directly the objects of our attention, in others they are obscurely the subjects of our consciousness. In extreme cases the mental part of the process is obvious enough. But we may gradually pass from these two cases in which the mental operation is more and more obscure, until it vanishes altogether. Many of the actions which we daily perform, such as walking, speaking, writing, or playing upon a musical instrument, afford examples of apparent automatic motions, being linked together by associations which do not require any conscious acts of volition. All these movements, however, are still voluntary, inasmuch as they remain under the control of the will which commands their commencement, can regulate their course, and can arrest them at pleasure. Recent physiological researches render it more than probable that the changes immediately connected with sensation and volition, are not confined to a single point in the nervous apparatus which might emphatically be termed the "*seat of the soul*," as Descartes expressed it, when he boldly pronounced the pineal gland to be that spot. And, in the present state of science, it is unquestionably more reasonable to suppose, that an obscure volent power extends along the spinal marrow in the lower animals, than to imagine that it is invested with new faculties manifesting themselves in the similitude of true voluntary motions.

We have already remarked, that there is no evidence for the localization of consciousness—which I take to be the essence of mind—in the cerebral hemispheres. The study of comparative anatomy, physiological experiment and pathological investigation, seem to lead irresistibly to the conclusion that these organs are the instruments of but one class of mental phenomena, and that they are not the peculiar seat of consciousness; in other words, that the sensorium does not reside exclusively in them. In the amphibia, the whole encephalo-rachidian mass seems to be invested with some degree of consciousness. It is hardly possible to conceive the co-existence of two separate and independent centres of volition and sensation in any animal, because we find it impossible to understand how consciousness can be subdivided. But if the essential seat of mind—as we have seen—be not in the cerebral hemispheres, and if those organs be only employed as its instruments in a certain class of mental operations, it seems quite legitimate to admit that the several parts of the encephalo-rachidian mass in reptiles may usually work together as a whole, whilst either of them is capable of operating alone under favorable circumstances, without involving ourselves in the modern paradox concerning the "Duality of the Mind."* Two illustrations—the one drawn from the inorganic, the other from the organic world—may render my meaning more apparent. If a magnetized bar of steel be cut or broken across the middle, each half becomes a perfect magnet; a new north and another south pole manifesting themselves at the points of separation. Yet the original magnet was not made up of the two which were formed by the division; it was *one*, capable, however, of being separated not only into two, but into any number of minor magnets, each complete in itself. Again, it is well known, that the circulation of fluid which takes place in the *chara*, within the long cells that form its stem and branches, has been carefully studied by eminent phytologists. The fluid passes along one side of each cell, from end to end; then returns along the opposite side; and then again follows its first track. Now, if a ligature be put around the middle of the cell, so as to divide it into two, this will not check the circulatory action; on the contrary, it will establish two currents, one in each new cell; and these will go on as regularly as if the interruption had not been made. Here, then, are two instances in which we can divide a whole into parts, of which each shall perform its functions; and yet the functions of the whole were neither the mere aggregate of those of the parts, nor had the functions of the parts an independent existence, until the division was made. Thus, when the amphibia are decapitated, sensation and volition are not entirely annihilated; the spinal cord still retains the power of performing these functions in an imperfect manner. Such an animal seems to be reduced by this mutilation, still lower in the scale; and for this reason becomes capable even of further mutilation, without the immediate extinction of life.

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* The will intervenes between knowledge and action; and the cycle of operations which take place when animals act with reference to external objects is this:—Impression, Sensation, Perception, Volition, Muscular Contraction.

Savannah, August 25th, 1845.

ART. VIII.—*Brief Notes of Cases in Practical Medicine, Surgery, and Obstetrics.* By JAMES M. GARDNER, of Newburgh, New York.

CASE I.—D. M., a female aged five years, after a restless night, was sick at the stomach, and vomited once early in the morning of the 16th of July, 1836. She then became suddenly comatose, a sudden swelling of the right tonsil arose, and a scarlet efflorescence appeared on her arms, abdomen, and fore part of thighs and legs. The efflorescence was of a dusky red hue; pulse so rapid that it could with difficulty be counted, small and contracted; breathing quick; heat of the skin below natural, on the calves of the legs, arms, and forehead; the other parts of the body preternaturally hot. This patient had a severe fall the afternoon of the previous day, by which she struck the occiput, was momentarily stunned, but soon recovered, and was apparently unaffected by it. At 12 o'clock I first saw her; she was then comatose; the pupils contracted, pulse and breathing rapid. During the afternoon she occasionally became delirious for a time, and then again comatose. She was bled to faintness; 20 grains of calomel were administered; and warm ablutions to the arms, breast and neck; sinapisms to the part, and cold applications to the head. At 5 o'clock, P.M., she was again bled to faintness, warm ablutions continued, and spirits of nitre given in large doses every two hours. The calomel produced at this time large involuntary evacuations. 10 o'clock, the patient sweating; no relief to the coma. Pupils remain contracted. 17th. 6 o'clock, A.M., skin dry and hot; pulse rapid, great delirium and jactitation—warm ablutions every twenty minutes were continued throughout the day, until 5 P.M., 12 grains of calomel were exhibited; the nitre continued. At 5 o'clock some moisture was discovered on the forehead, neck, and breast; the purgation had been extreme; the pulse was over 130. The pupils of the eye more sensible to light, and patient would occasionally recognize her attendants. 15 drops of denarcotised laudanum were exhibited; the ablutions were discontinued; the nitre and super-carbonate soda were continued, and she was ordered cold water alone as drink.

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* This view of the subject was suggested by the perusal of the able review of Dr. A. L. Wigans's work on the "Duality of the Mind," contained in the British and Foreign Medical Review, for July, 1845, p. 1 et seq.

18th, 6 o'clock.—Considerable delirium and restlessness through the night, but is better; breathing and pulse both slower; has been more sensible; passed urine largely, and has once called for the chamber. Anodyne repeated every six hours; decoction of bark and magnesia, a teaspoonful every three hours; nitre continued. Throughout this day the patient was evidently better, and at 10 at night, a little arrowroot was taken; purging still keeps up. Rhubarb and calomel, a small dose ordered to be given at 4 to-morrow morning; mouth a little affected with the sub-muriate; pulse 120, soft and rather full.

19th, 6 o'clock.—One stool in the night, green and slimy; patient evidently improving; decoction continued. Cathartic of rhubarb and calomel to be given at 12 o'clock; a little chicken tea was taken; the patient is now rational; pulse and breathing good; some nausea and restlessness. 1 o'clock, P.M., cathartic produced one large green discharge, at 11 o'clock; no other change. Half past 6 o'clock, P.M., patient continues rational; the scarlet eruption is more increased; nausea with occasional vomiting of drink; restless, but pulse and breathing good. Cathartic of rhubarb and calomel ordered to be given at 7; decoction continued.

11 o'clock, P.M.—Much the same; no discharge from bowels; 12 grs. of calomel were given; drinks and decoction as before.

20th, 6 o'clock.—Has had a motion of the bowels; some nausea; perfectly sensible, and very irritable. 10 o'clock, A.M., no change. 12 o'clock at noon, had a passage from the bowels at 11 o'clock, dark green; stomach now settled; half-past 6, much the same, throughout the day the decoction of bark and magnesia was continued every three hours; a gentle anodyne after each evacuation; a cathartic was given at 10, A.M. Cathartic to be given at 8, P.M., other medicine continued through the night, the efflorescence is still apparent on the breast, abdomen and arms—though declining.

21st, 7, A.M.—Cathartic has not operated, patient much the same, decoction continued, and cathartic to be given at 8. Half-past 6, P.M., has taken some soup; two small passages; no appearance of efflorescence; tongue yet red; pulse rather quick, has slept more this afternoon, and is peevish when awake; another cathartic of rhubarb and magnesia given; decoction continued; mouth quite sore.

22d, 7 o'clock, A.M.—Pulse natural; tongue moist; is improving, Half-past 6 P.M., has had a good day; is decidedly better.

23d. Continues to improve.

24th. The swelling of the sub-maxillary gland of the right side has again suddenly arisen in the night—quite hard. Spiritous applications were administered, with a view to discussion.

25th. Tumor rapidly enlarging, very painful; warm fomentations, and large poultices were ordered, in place of the spiritous applications. From this time the patient continued with but little fever; the appetite good, and strength improving, until the 28th, when dropsied effusions were apparent in the cellular membrane, in the abdomen, and slightly in the chest. The fluctuation of the abdomen is very apparent; the extremities pit on pressure, and breathing is more difficult when lying;—decoction, barks, with magnesia, and spirits nitre ordered; still poulticing tumor.

Aug. 5th. Since last report, the dropsy of the extremities has disappeared; so also has that of the chest; some fluctuation still remaining in the abdomen; this day opened the maxillary tumor, which was very large, reaching to the clavicle; it was well matured, and discharged a large quantity of good conditioned pus. Patient recovered perfectly.

II. Case of Dysmenorrhœa—patient unmarried—date of disease from commencement of menstruation—shreds of membrane voided at each attack—patient treated for six months on Dewe's plan, by Vol. Tincture of Guiac, without benefit—Macintosh's plan with the probes proposed, but not acceded to.

III. Case of Congestive Scarlatina, with early and strong determination to the head—patient twelve hours after the attack lay perfectly insensible and comatose, with dilated pupils, with involuntary evacuation—patient a female, aged four and a half years. This case was successfully treated by the most active depletion. She was twice bled to complete relaxation in the course of six hours—twelve hours afterwards was again bled—between forty and fifty hours after the attack the eruption made its appearance equally over the body—Parotids both swelled, one suppurated extensively—dropsical effusions in this case were extreme, but ultimately the patent recovered—difficulty in swallowing was complained of, but the throat was not at any time much inflamed.

IV. The subject of the very singular case which I now propose to condense from my notes is a very beautiful young girl of seventeen years; her complaint commenced at the age of fifteen, and she may now be said to have entirely recovered. At the present writing, January 3, 1837, she has called, with her mother, on foot, a short distance, to wish me a happy new year. Many physicians in the county have seen this patient, and can bear witness to some of the singular phenomena that the case has presented. She has been visited by many intelligent persons, not physicians; by several ministers of the gospel; and her case has been one highly interesting to the profession; inexplicably wondrous to the curious, and indissolubly connected with witchcraft by the ignorant. As to a name for this very singular congregation of symptoms, I think the best to be the *Protean malady;* for, I must say, that, during my attendance on this case, which has been constant, I do not recollect scarcely a disease of which I have read in Cullen or Good, the symptoms of which she has not at different times exhibited. To detail the symptoms of this case *seriatim* would occupy too much time and space. I cannot do better, therefore, than to follow Dr. Torbet's plan, and quote his words in the description of a case similar, which has lately occurred in his practice in Paisley, Scotland.

Symptoms in the Head.—They have headache, of which no words can convey an idea; ending, perhaps, in insensibility—or there is a heavy weight pressing down their eyelids—a tight bandage compresses, or hammers beat within their heads, bells ring in their ears, vertigo and sickness overpower them, noise and light disturb them.

In the Chest.—A sepulchral cough, each fit of which seems to threaten existence, over which medical aid seems to possess no control, harasses, from morning till night and night till morning. There is excruciating pain in the chest, especially during the cough, which is perfectly devoid of expectoration. There is a feeling of swelling and choking at the under part of the neck, tremulous palpitation of the heart, the pulse is quick and agitated, but varying greatly with the severity of the cough, and the heart's pulsations seem to occupy the whole left side of the chest.

Digestive Apparatus.—Vomiting without apparent cause, incessant retching for hours, occurring, perhaps, every day for weeks, without anything being vomited; no appetite, unquenchable thirst, occasional severe pain in the belly or muscular cramps, and costiveness, alternating with diarrhœa, the stools unaccountably copious.

Organs of Voluntary Motion.—Cramps, prickling or numbness, sometimes severe spasms, more like tetanus or hydrophobia than anything else, ending possibly in catalepsy or paralysis of one or more limbs, ensue. Such, says Dr. Torbet, is an epitome of the symptoms of the more violent cases; but almost endless variety must of necessity occur, according as the several nervous centres are affected, and their affections modified by individual circumstance. All of the above symptoms, and many more, were seen in my patient. To detail the endless variety of symptoms in this case would be a tedious task, but I will merely add, in concluding the symptomatology of the case, that, together with a deprivation of voice and speech, every affection that a medical man can conceive of to attach to the muscular system was here present, even *Chorea* and *Hydrophobia.* In extending the same remark to other systems, I will but have given a true picture of this singular case. But the most curious part of this disease remains to be told. After the patient had so far recovered as to be sensible of impression on the organs of sense, she was found to have lost all her memory, and all recollection of any transaction previous to and during her sickness. She did not know her relatives or attendants—she had forgotten the name of any article presented to her, together with the power of pronouncing it, had she even recollected it. By degrees she slowly learnt, by the industry of her attendants, to articulate. She was then, in all respects, treated as an infant about to learn to talk—she was pleased with every little toy presented to her, and her bed for a long time presented the appearance of a toy shop. By degrees she relearned her spelling, and was progressing in writing, still ignorant, however, of the relationship of her father or mother, or sisters or brother, and scarcely recognizing them from strangers. When at about the end of the third month from the time when her organs of sense regained their functions, she was suddenly seized whilst sitting up in bed with violent acute pain in the site of the sagittal suture, causing her to cry out. The pain lasted a few minutes and went off with a rumbling cracking noise at both ears—her countenance, for a moment or two, wore the look of wild surprise—tears unbidden gushed forth, and a full and perfect consciousness of existence was instantly established. She now called her mother, father, and other relatives by name—she took the book presented and read with ease; the pen and ink were produced and she wrote. She recollected the scenes of her childhood and youth; in short, her memory of all transactions previous to her sickness was restored, but the story of her wonderful sickness repeated over and over to her, with all the particulars, was to her a tale of wonder, of which she, the subject, knew nothing. It ever will remain a blank in her existence.

In reflecting on the probable cause of an assemblage of symptoms so strange and opposite, I am inclined to think that Dr. Torbet has truly divined the cause, at least it appears to me that no other can reasonably be offered, viz: a neuralgic affection of the ganglionic system of nerves commencing at their different centres. In the case I have detailed, I think the phenomena warrant the conclusion that such was the case primarily, and that the neuralgic affection of the spinal and cerebral nerves was a secondary effort, occurring sympathetically, or in consequence of that intimate connexion subsisting throughout the nervous system.

Could the formation of false membrane on the surface of the brain during this patient's sickness (itself an effect) yet become a cause for the loss of memory, and might not the gradual thinning by absorption of this membrane, as the recovery progressed, occasion a sudden disruption of it, and would such a supposition be entitled to any weight in accounting for the immediate restoration of memory? These are questions perfectly conjectural, and which I offer with great diffidence for consideration.

V.—Case of Fatty Enlargement of the thyroid gland, successfully treated by the internal use of hyd. potash, and the application of the iodine ointment to the tumor.

VI.—Case of Venereal Consumption; patient a married woman; extremely emaciated, and to all appearance in a hopeless condition. Cured by a mercurial course.

VII.—Case of Tubercular Consumption in an unmarried female, in the last stages; at the end of the tenth month of disease, a large tumor suddenly formed in the right groin, and one under the left axilla; tumors opened, and an enormous quantity of pus bearing an exact resemblance to that expectorated, discharged. Patient recovered and is now in good health.

VIII.—Case of Vaccination in a patient extensively affected with scabies, in which the pustules of the itch were all converted into the cow pox pustule; patient a girl aged seven years. She had several hundred pox of perfect vaccinia, and altogether presented a curious and singular case.

SURGERY.

I.—Fracture of the superior third of the femur, occasioned by a piece of $\frac{3}{4}$ stuff, pointed, penetrating the muscles on the inside of the thigh, fracturing the bone in its course, and coming through to the length of two inches on the outside the thigh, about one and a half inches below the great trochanter. The piece of wood remaining in the wound.

None of the large blood vessels injured. The patient, a lad aged 14, recovered in about eight weeks after strict confinement, and continued extension; no splints were used; extensive suppuration and sloughing occurred, laying bare part of the nates, the perineum and testicles; the twelve tailed bandage was used; the quantity of matter discharged daily from the inner and outer openings of the wound was enormous, and precluded all idea of the use of splints. No shortening of the limb during his recovery.

II.—Amputation of the metacarpal joint of the ring finger by the semicircular flap incision recommended by Saml. Cooper. Stump smooth, and no puckering of skin between fingers.

III. and IV.—Two very bad cases of hare lip with great loss of substance, both cases successfully operated on with scalpel and interrupted suture. One a male aged 42 years, the other a female aged eighteen months.

V.—Fracture of the middle portion of the femur occurring in a child of three years old; treated by many tailed bandage, splints and double inclined plane. Union at the end of third week.

VI.—Fracture of both bones of the leg, just above the ancle, by force applied to the site of fracture; patient aged nineteen years; union did not take place until eighth week. It was about four months before this patient could walk without crutches. In this case the general health was good and no cause could be assigned for the delay in the uniting of the fracture, save that the force producing the fracture, instead of acting on the extremities of the bones, was applied directly to the part fractured.

VII.—Violent and extensive inflammation of the cellular membrane of the leg successfully treated by deep and lengthy incisions, the removal of the putrid sloughs and tight bandaging.

VIII.—Case of imperforate anus; no cleft in the buttock, and no appearance of an endeavor on the part of nature to form an anus. In this case an artificial passage was produced by a curved slender trocar; meconium was voided for a day or two; but the child soon died; we could not succeed in keeping the passage open.

IX.—Extraction of a straight No. 1 needle, which had lain in the body forty-two years; it was taken from under the tendinous aponeurosis, covering anterior and inner part of the thigh. Lock-jaw ensued on its extraction, from which the patient recovered.

X.—Case of choking from a piece of bone sticking in œsophagus, relieved by the probang.

XI.—Case of complete paralysis of the bladder now existing; in which the catheter has been passed over 3000 times, the patient keeping an exact account of the number.

I. N.—at the age of four years, of scrofulous habit, rickety, and of an extremely weak and delicate habit of body; being at this age not able to stand alone, in falling bruised his back, and fractured his left leg about one and a half inches above the ankle, breaking both bones. The fracture was most unaccountably not discovered, until eight days after the accident, and then the physician who had been all the while in attendance, treated it with short splints, beginning just above the fracture, and terminating a little below the ankle. The child was suffered to crawl about the floor, as though nothing had happened. The consequence was, as might have been anticipated in such a constitution, an artificial joint. The above is the history of the case as I received it from the child's parents; the patient is now seven years old, having been three years the subject of artificial joint. Upon carefully examining the fracture, I found the bones so much diminished by absorption, that that circumstance alone was a sufficient objection to any attempt at reunion, not to mention the unfavorable habit of body of the patient. I therefore proposed amputation, which was acceded to; the limb was taken off just below the knee, and in the usual time, the stump healed firmly, without any untoward symptoms.

Remarks.—The detail of cases under altogether more favorable circumstances than the above, in which the seton had failed, joined to the diminished size of the bones, and the perfect uselessness of the limb in its then situation, were conclusive with me in directing an amputation. It would, I think, have been cruel to have attempted a reunion under the circumstances of the case, and when so little ground existed on which to found a trial. The question may be asked why amputate below the knee, why not in the fracture? I answer for the following reasons:

The end of the tibia was entirely too small and too pointed to have ever borne the weight of the body; the patient, if the stump had at first healed, would, as soon as he came to bear any weight on it, have had an ulcerated stump, with constant and tedious exfoliation. Again, had I amputated a little higher in so short a leg as a child of seven years, the length left below the knee, would have been but very imperfectly and awkwardly handled, by reason that the gastrocnemii and soleus could have no fixed point of action; the lower portions making up the posterior portions of the flap, and remaining permanently loose. The patient could not get rid of this difficulty by binding the leg, for then the length which must have projected behind, would have been equally awkward. On the other hand, by amputating immediately below the knee, the tegument over the knee joint would form a natural cushion, to be placed in socket; and the shortness of the stump could not interfere with his necessary motions. Add to this that the patient was the child of poor parents, and in all probability would be necessitated to labor for a living. His chances of assisting himself would certainly have been less, had I amputated lower. On dissection, the bones were found lessened at least one half; they had increased in length so that the under and upper parts of the broken bones passed each other a full inch and a half, and lay widely separated, and a loose kind of cartilaginous capsule enclosed the whole length of the fractured bones. The fibula had almost disappeared, and the fractured ends of the tibia enclosed in the capsule were pointed and thin.

OBSTETRICS.

I.—Case of presentation and birth of the arm; the pelvis capacious; strength good; case left to nature; duration of labor, eight hours. Spontaneous evolution of the child, being expelled breech foremost; the arm partly returning in the pelvis—recovery in the usual time.

II.—Case of extensive prolapsus of the rectum, happening contemporaneously with the birth of a very large child; reduced and recovered from by the use of the T bandage worn very tight.

III.—Case of extreme contraction, and rigidity of the external parts, happening in a first labor, and preventing delivery; in which, by the use of bleeding, warm fomentations assiduously employed, and ergot, delivery was accomplished in less than five hours.

IV.—Twin case, both boys, at the end of eight months. Children alive after birth; separate and attached, the one anteriorly and the other posteriorly. After birth of first child last extracted.

V.—Twin case, both boys, at the end of five months. Children born alive, and died at the end of the third hour from birth—placentas united.

VI.—Attachment of the placenta over os uteri—patient strong and robust—the mother of a number of children—pain rapid and forcible—labor advancing rapidly—profuse bleeding during pain. Vagina stuffed, and case left to natural pains. Placenta expelled before and together with child. Mother and child both did well.

VII.—Morbid adhesion of placenta, wherein about two-thirds of the mass was taken away; the remainder producing for several days alarming symptoms of faintness, flooding, great fetor of the parts. Astringent and antiseptic injections into the uterus—frequent friction of the abdomen—tight bandaging—strength supported by wine and nourishing diet—at the end of the eighth day the remainder of placenta cast off. Patient recovered rapidly.

VIII.—Case of Spina Bifida—the patient's first child—it is now eight months old—the separation occurring in the lumbar vertebræ—the child was also deformed in its lower extremities.

IX. and X.—An example of contraction of the uteri and of the body of the uterus on the placenta and cord immediately after the birth of the child. Bleeding, followed by a large opiate, was used in both these cases, and in both the relaxation of the uteri at the end of twenty-four hours was such as to admit of the extraction of the placentas. In both these instances ergot was used. Cases of this kind are very rare. I have never met with any save the two just noticed, nor can I find any record of similar cases, except in Bard; he details two cases from Perfect's, and one from his own practice; death took place in both of Perfect's cases, I think. Had it not been for the cases detailed by Bard, I should have blamed the ergot for the subsequent condition of the uterus; but ergot, I believe, was not used in Bard and Perfect's time.

I believe that ergot is a frequent cause of still-born children, not from any specific effect on the child, but by the continued compression it keeps up on the body of the child, owing to the tonic contraction of the uterus which it induces.

XI.—Case of triplets, the patient a light mulatto, aged 38. At the age of nineteen she lost her first husband, after having one child. She remained sixteen years a widow; about a year after her second marriage she had a female child. Three years from that time, being the present writing, October 11, 1842, she was delivered of three boys, all alive and well, the average weight six pounds. Labor commenced about 9, A.M., and was finished at 12, M. (three hours). I saw her at half past 10, she had lost the waters of the child first presenting; this child presented naturally. The second was a footling case, and was expelled, together with its placenta completely enveloped in its membranes, so that the membranes were broken after the birth of the child. The third child was a breech presentation, and was expelled in the same manner, together with its placenta, as the second. Shortly after the birth of the last child the placenta of the first was cast off. The patient's pains were regular and powerful, she had been afflicted during the latter months of her pregnancy with a harassing cough, which incommoded her very much during labor, over which medicine exerted no control. Her cough subsided entirely after labor. The patient is of small stature and thin in flesh. Oct. 12, is quite smart, and children will probably live.

XII.—A case of natural labor—patient always irregular in her menses, had been married several years before she became pregnant, the first suspicion of pregnancy arose in her mind from quickening; she not having the most remote idea of being enccinte, by reason that she had had no menstrual discharge in the sixteen months previous.

Eighteen months previous to my attendance, Mrs. Wolsey's case commences. Aged thirty-four years and six months at the commencement of disease. Married at nineteen years of age, had first and only child within 10 months and a little over,—enjoyed good health until the age mentioned above. The patient suckled her child and weaned her at sixteen months. Child always healthy. Catamenia very regular, though rather profuse. At the age of 34 years and six months, a bloody, ichorous discharge commenced suddenly from the uterus and vagina; this discharge was constant as well during the catamenia as in the intervals. At the time of my first seeing the patient, the discharge had become more puriform, though much mixed with bloody matter. About twelve months from the first attack, she experienced occasional fits of strangury. At the time I first saw the patient her appearance was pale, and from being a remarkably healthy and florid complexion, she was now emaciated and reduced, and had general anasarca. During the eighteen months that Dr. Durance prescribed for her, her appetite was good for the first twelve months; the remaining six months she was very unwell, the three first months being confined to her bed. Dr. Durance, considering the case Leuccorrhœa, prescribed bleeding fourteen ounces, cathartic pills, which had the desired effect of depletion; three weeks after, bleeding was repeated. Soda and gum arabic were administered as palliatives; tincture murias ferri, sulphas zinci, three grs., three times a day; cold applications of vinegar and water applied to the parts; cathartic pills occasionally administered; an offensive smell continued rom the first, and increased until I saw her; the smell was always increased at the time of the catamenia; the last Sunday in May, I examined and found a polypus; ligature applied. A dark bloody ecchymosis commenced about this time, and extended from the labia towards the groins, up over the mons veneris half way to the umbilicus, and down the upper third part of the thighs; the discoloration has a remarkable black appearance in many places, and in others inflamed lines were seen radiating from the pudenda as from a centre, and intermixed with the before mentioned discoloration; about the seventh day from its first appearance, absorption commenced; it was attended with great soreness. At the time of the extraction of the last part of the polypus, which happened in the latter part of August, she was sensible of a lacerating sensation in the left iliac, and had a perfect sensation of being perfectly freed from a foreign body immediately corresponding with that part where she felt laceration of parts internally; thus arose an abscess which pointed externally, and discharged constantly a small ulcerous and offensive discharge resembling exactly the discharge per vagina, and healed as soon as the last part of the polypus was extracted. This abscess had first the appearance of a large blue vein of the size of the little finger, and its coats became the walls of the abscess—a total disappearance of the vein followed the discharge of the abscess.

N. B.—A burning sensation in the stomach and throat, was throughout a prominent symptom. Powdered cicuta three times a day in doses of one grain until soreness in the throat, then one powder a day; the other treatment will be found in my book.

N. B.—Previous to the extraction of the polypus, costiveness prevailed to a great degree, which was relieved by injection. After its extraction a diarrhœa ensued, lasted eight or nine weeks, and then the bowels became regular. The patient at this time was reduced to a perfect skeleton, both hips were through the os sacrum bare in several places, and ulcers discharging from several places in the back. An extremely sore mouth was an attendant symptom. One remarkable symptom was a sudden growth of hair, covering the chin, upper lip and cheeks; the eye-brows were also suddenly elongated; the whole face, except the forehead, was covered with hair like fine down an inch in length, occasioning one of the most singular appearances possible to be conceived. Scissors were employed and it was cut off, but in three days it was as long as at first. At the expiration of three weeks, the patient being then gaining strength, the hair fell off suddenly, like to the shedding of hair by an animal; her blood was entirely free from redness; her skin so transparent, that tendons, muscles, &c., were seen through it; her nails were like fine wove paper; the hair of the head was all renewed during her convalescence.

The patient is now, June 27th, 1824, forty years of age, perfectly healthy, a smart, hard-working, laborious woman, florid complexion, and perfectly free from any complaint; she has for the last six months cohabited with her husband, but has had no symptoms of pregnancy.

XIII.—April 16, 1840, 3 o'clock A. M., Mrs. A., after a labor of nine hours perfectly natural (with the exception which will be hereafter noticed), was safely delivered of a female child presenting the following appearances. A spina bifida of the dorsal vertebræ. The number of deficient vertebræ I judged to be as many as three, if not more; the opening occupying full two inches in length by one and a half inches in width, and corresponding with that portion of the spinal column formed by 6th, 7th and 8th, or 7th, 8th and 9th dorsal vertebræ, as near as I could determine by the eye. The integuments terminated smooth, even, and abruptly at the edges of the tumor, which had an elevation of about three quarters of an inch, was filled with fluid and covered with a thin, tough and almost transparent membrane. Pressure on the tumor produced sleep, and immediately stilled the child when crying; when the pressure was removed the tumor slowly filled to its usual size. Anteriorly a portion of the integuments about the size of a cent in the site of the umbilicus was found wanting, through which protruded the intestines, and a membranous bag, which I have no doubt was the stomach. They were all enveloped in a smooth, shining, transparent membrane (probably the peritoneum), through which you could distinctly see, what I considered the stomach, together with the numerous convolutions of the intestines. The size of the tumor, independent of the umbilical cord, was about the bigness of the clenched hand. The umbilical cord adhered to the side of the tumor firmly, and could be traced as far as the edge of the opening. The whole of the contents of the tumor could, with considerable difficulty, be reduced within the abdomen, but immediately returned so soon as the pressure was removed. Meconium was passed during the reduction of the tumor. After the birth of the head three severe pains were suffered, without any advancement of the child. During the fourth pain the face was turned to the left thigh of the mother, and with the fifth and last, the child was turned completely on its back, the shoulders advancing through the transverse diameter of the inferior strait, and the large tumor external to the abdomen, occupying the space under the arch of the pubes. In this position the child was expelled from the womb; the umbilical cord was of the usual length, and was entangled around the neck of the infant.

Art. IX.—*Three Cases of Encysted Dropsy.* Communicated by Edward H. Dixon, M.D., of New York.

Mr. Editor,—The three following cases of dropsy will undoubtedly interest your readers, though I regret my inability to present two of them in a more finished state; the multiplied duties attendant upon a laborious and extensive country practice having prevented the receipt of any other than a verbal account from two of my friends. Dr. Clark very promptly transmitted his, which I herewith send you. The two cases of Drs. Young and Wells were communicated to me personally by those gentlemen, other physicians in their neighborhood being cognizant of the facts, and also communicating them to me. Entire confidence may be placed in these gentlemen. I did not feel at liberty to withhold them longer from the profession, after having received permission from my friends to publish them. The first is that kindly transmitted by Dr. Wm. P. Clark, of Belvidere, Warren county, New Jersey. So far as I know, the practice pursued was entirely novel in character, and the happy result in rescuing from death an estimable woman, has been the cause of great happiness to her accomplished and excellent physician. Dr. Clark thus writes in his letter to me:—"Mrs. Ellen, wife of Abram Newman, aged 40 years, of Hardwick township, Warren County, N. J., had been in declining health for a year or more, previous to my being called to prescribe for her. She was the mother of eight children, and until within a short time preceding my visit was supposed to be again pregnant. Increasing debility, rapid emaciation, a growing distension of the abdomen, and the occurrence of very troublesome and increasing hernia cystalis, united with other discouragements, induced her husband to ask my attendance, which commenced November 30th, 1843. I found the patient as above described, and, in addition, with a poor appetite, and with more or less of fever of irritation, suffering constant uneasiness while sitting, and pain when on her feet. It is hardly necessary to your purpose to enter into a detail (if I could in the absence of memoranda) of the ordinary symptoms and prescriptions, as these presented no novelty; and I shall therefore confine myself chiefly to what may be deemed extraordinary in the case. You performed the first tapping, at which time I think we drew five and a half gallons. This was December 14th, 1843. She bore the operation well, and with cordial restoratives maintained her strength afterwards nearly as well as before, though the emaciation and debility continued steadily increasing. At one time, in the interval between the first and second tapping she was bled in small quantity every other day, say five or six times in all; and whilst this operation was going on, the abdomen, which we daily measured, filled more slowly, but the increasing enlargement continued, although on some days it was suspended, and sometimes even diminished. On January 4th, 1844, she was again tapped, and three and a half gallons were taken. After this operation her debility and emaciation rapidly increased, and these, with a failure of appetite, indicated a change of treatment, at least so far as to suspend hydragogue cathartics, and other depleting remedies. The interval between the second and last tapping was used more with a view to give strength to the patient than with the expectation of eradicating her malady. She partially recruited, but the emaciation and debility were extreme, and it had now become evident that but one more tapping could be borne. In answering to myself the question what can now be done, it occurred to me that the debility which would be further induced by the next tapping, might lessen the hazard of inflammation if an astringent liquor was thrown in immediately after the tapping, and that the local inflammation succeeding the stringent action might thus accomplish the great desideratum of closing the relaxed and, in power of contraction, the now exhausted exhalants, and thus, perhaps, save my patient. On the 23d Feb. Mrs. N. was tapped the third and last time—about three gallons were removed, and the belly thus emptied. She became at once faint and prostrate, requiring wine and volatiles to prevent syncope. Having before the tapping prepared an infusion of the sliced and dried fruit of the Diosphyros Virginiana (or common *Persimmon*), a ten oz. syringe, with large sized catheter attached, was charged, and the catheter being introduced several inches through the puncture made by the trocar, the contents of the syringe were thrown into the abdomen. In about ten minutes after the injection, the abdomen was carefully handled all over, and after this the contents pressed out through the puncture. The discharge was turbid and filled with gelatinous flakes, and amounted in volume to about the quantity thrown in.

I did not leave the bedside of my patient for twenty-four hours, nor the house for thirty-six. The prostration during the first twenty-four hours was extreme and alarming; but reaction then began to be established, and at the expiration of thirty-six hours a moderate fever pervaded the system. The great tenderness of the abdomen and prostration deprived the patient of all power of motion—nor could she speak above a whisper until the close of the period last named. Tepid fomentations were applied to the abdomen, and continued until a bandage round the belly could be borne, when it was applied and tightened from time to time, so as not to be uncomfortable. The lungs now became hydropic, and frequently in one hour a large pocket handkerchief would be saturated to dripping with water coughed up from the lungs. Five or six days after the tapping, and three or four days after this exhausting flow from the lungs had continued, chloride of lime, with sulphuric acid poured on it, was passed quickly under the nose, the inhalation of the gas exciting a very short and frequent spasmodic cough, controlled at pleasure, however, by the amount and frequency of the inhalation. This drove the water from the lungs to the skin, and established a profuse and continued sweat. This was checked mainly by washes of lime water, and frictions of decoction of pepper in brandy. The water returned to the lungs, after some four or five days, discharged by the skin, and, in pursuing the same course as at first, it went back to the skin. The same means as before, after some days of continuance of the sweat, were used upon the skin, accompanied with the inhalations of chlorine. During three regular metastases, it was gratifying to observe that the morbid waste of water was diminishing, and that the patient's appetite, which I took every pains to gratify with the best of food, such as broiled rabbit, squirrel, and pheasant, improved. The last translation of water, and whilst repelling it at the same time from the lungs and from the skin, was to the stomach. Constant nausea, frequent retching, and some vomiting at intervals now occurred. I gave her an emetic of sulphate of zinc, with tinc. lobelia, and immediately succeeded it by tinc. cantharides and catechu—the latter being freely given, and its use continued. You now have the case. The urinary secretion was from the first fully established, and Mrs. N. rapidly recovered from about April 25th, and at about June 10th all the functions of her system were fully restored, and since that time she has enjoyed uninterrupted good health. It may be right to remark that the protrusion of the bladder without the labia was often of the size of a goose egg, and always subsided after each tapping.

The following case was communicated to me during a professional visit at Hillsdale, Columbia Co., N. Y., by Dr. Ovid P. Wells; and when I add that the patient was his own wife, and that he acted under the notice of the accomplished Dr. Knight, of New Haven, Conn., it will, I hope, sufficiently authenticate a case of great importance, of which I am only able to hand you a report from memory, of a verbal account.

Dr. Wells's Case of Encysted Dropsy.—About nine years preceding this (Aug. 4th, 1844), I was reduced to the trying necessity of a consultation in the case of Mrs. W., who had been for some time the subject of an encysted or ovarian dropsy on the left side. It had gradually progressed, until it occupied the whole abdominal region, and would, from its appearance, have passed for ascites. Its early history, including its position, the greater thickness of its parietes, and the obscurity of fluctuation, sufficiently indicated its encysted character. Its size was so great as greatly to impede respiration, and harassing fever, cough, and loss of appetite and sleep, indicated the urgent necessity of immediate measures for relief. After consultation with Dr. Knight, and other professional friends, I was sadly disappointed by the conclusion, that constitutional measures could alone avail; the inadequacy of these had for some time past been most painfully apparent, and I had hoped that my friends would countenance and aid me in the performance of an operation. From this course they endeavored to dissuade me, alleging that the obscurity of fluctuation over a large portion of the abdomen indicated the solid character of the tumor, in a degree so predominant as to render the utility of a puncture more than questionable. With the highest confidence in the skill and kindness of my friends, I was convinced that the constitutional irritation with which Mrs. W. had long been oppressed would soon destroy life, and although it caused me a degree of anxiety to which I hope none of my professional brethren will ever be subjected, I resolved myself to make an effort for her relief. In the presence of my friends, I accordingly passed a large trochar its entire length, as nearly as we could judge, into the cyst directly in the centre of its originating point. Judge of my intense disappointment when nothing appeared. My friends and myself were now convinced of the impossibility of affording relief, and we were obliged to abandon the case to the effort of nature, and such trifling measures as had hitherto been used. To my great relief the next morning, the wound began to discharge a mellicerous substance, which continued daily to increase, till several quarts had been evacuated. The abdomen was quite flaccid, and respiration, appetite and sleep greatly improved. After a few weeks, I resolved to try and effect the diminution of the discharge by a slight solution of sulphate of zinc. It was returned from the wound most favorably, and evidently checked rather than increased the constitutional symptoms, as well as the discharge. From that time to this, Dr. W. told me he has continued to throw in solutions of zinc, sulphate of copper, oak bark, and iodine; and although he is enabled to control the discharge effectually, the wound continues open, and the supply constant. Mrs. W. enjoys very good health; I saw her myself during my visit pursuing her customary household avocations, and it is now ten years since the puncture was made.

The third case was communicated to me during the present summer by Drs. Young and Nelson, of Kingston, Ulster Co., N. Y. A lady, in the practice of the former, was the subject of ovarian dropsy, which had increased for a long time, and finally became so large as to render her very unwieldy. She declined all surgical interference, and although she had been subjected to severe hydragogue remedies, the abdomen continued to increase. One day she fell down stairs, and fancied she had experienced an internal rupture of the sac, an event that probably had actually occurred, for she repeatedly struck the abdomen against the steps in her rapid descent. From this time the swelling subsided, and was accompanied with constantly increasing micturition, until it entirely passed away, and has never returned. She now enjoys good health.

Remarks.—It would, perhaps, be most becoming in me to submit these interesting cases without comment; but I feel that justice would not be done my friends, were I to do so. Dr. Clark's practice was highly original, being, so far as he knew, without precedent. The case was one of very great interest, and appealed most earnestly to the feelings of a man, thoroughly versed in all the resources of his art, and on whom his patients rely with a degree of confidence and affection rarely witnessed. I had myself seen the patient, and can bear witness that from her appearance at the first operation, there could have been no other prospect than a speedy death at the third. The metastasis of the disease (if so it may be considered, and it is a pity Dr. C. had not tested its albuminous character) was very interesting, as well as the constant change produced by the remedies; and here I ought to remark that these changes were constantly witnessed by Dr. Byington, and several other neighboring physicians, so that there is no room to suppose any of these changes were imaginary.

Dr. Wells's case, in connection with the facts of numerous operations on the ovaria, far more formidable in character, and the frequent cures of immense chronic sinular and psoas abscesses by injections, sufficiently attest the great resources of nature in a desperate class of maladies, when decisively assisted by art. All will appreciate the painful situation of these two gentlemen, particularly Dr. Wells.

With regard to the last case, may not the inference be drawn that a sub-cutaneous incision into the sac would occasionally be followed by the subsidence of the tumor, and may not this be a fair hint of nature's to the surgeon?

PART SECOND.

Critical Analysis.

Art. X.—*Mental Maladies. A Treatise on Insanity.* By E. Esquirol, Physician-in-Chief of the Maison Royale des Aliénés de Charenton; formerly Inspector-General of the University; Member of the Royal Academy of Medicine, &c. Translated from the French, with additions, by E. R. Hunt, M.D.

From the Cimmerian blackness of the moral atmosphere of the French Revolution, a few bright lights shine forth with a partially redeeming lustre—a grateful evidence that humanity, though calling into active exertion all the direful passions of the heart, still reserved a portion of its better nature,—still retained a particle of the generous warmth of a holier spirit,—still clung to the breaking links of the golden chain which reaches from the earth to heaven.

Among these moral luminaries was the spirit of Pinel, the friend, the benefactor, the liberator of the Insane. The manly independence of Mirabeau, when he rose in the Convention, and, in his speech to the messengers of royalty, threw down the gauntlet of defiance to the king, has been sufficiently lauded by editors, orators and historians; the heroic daring with which Napoleon crossed the Alps, and prosecuted his career to the spot where the "spirit of twenty centuries looked down upon him from the summit of the Pyramids," has placed him at the head of military chieftains; but, under a consideration of all circumstances, it is doubtful whether either of these men displayed a greater share of *true courage* than was manifested by Pinel when he entered the cells of the Bicêtre, and took from the wrists and ankles of some forty or fifty maniacs the manacles and chains which for many years had held them captive. Van Amburgh quells the fierceness of lions, and Driesbach makes pets of leopards and tigers; but, previously to the "unbinding of the heavy burthens" at Bicêtre, it was believed that the spirit of the maniac no man could tame. How clearly was the error of this opinion demonstrated; how forcibly was the fact illustrated, that the impalpable cord of love, with gratitude for a generous action, is stronger than bars of steel and bands of iron! How beautiful an exhibition of the effects of that kindness of which a recent author says, "no man hath measured it, for it is boundless; no man hath seen its death, for it is eternal."

Jean Etienne Dominique Esquirol, the author of the work before us, was the favorite pupil, the friend, and, finally, the successor of Pinel. With a native disposition well qualified for the enterprise, combined with the instruction, both by precept and example, of

"So good, so noble, and so *kind* a master," he received the mantle of responsibility as it fell from the shoulders of his teacher, and, through a long series of years, wore it with the dignified grace to which it had been accustomed. He tilled the soil whose sod had been broken by his predecessor, until the fir-tree had supplanted the thorn, and the myrtle-tree had grown in the place of the brier.

Pinel was, in France, as Tuke in England, the pioneer in the great scheme for the melioration of the condition of the insane. Esquirol followed, and carried the enterprise to a point which the brevity of life alone prevented his predecessor from attaining. With the results of the experience of the latter, the former gained an amount of knowledge in reference to insanity, the insane, and asylums for their treatment, which, in France, had never been previously acquired.

Esquirol was a classical scholar, and hence acquainted with the literature, as well as the medical science, of the Ancients. His chief enjoyment was in the practice of the special department of disease to which he was devoted. To use a common phrase, "his soul was bound up" in his occupation. His life, during forty years, was dedicated to it. Nor does the Pagan before his idol, nor the Mahometan beneath the dome of Saint Sophia, kneel with greater sincerity of heart, or singleness of purpose, than did he to this, the greatest worldly purpose of his existence. Connected for a long time with two of the largest institutions in the vicinity of Paris, those of Salpêtrière and Charenton; and, at the same time, conducting a similar establishment founded by himself, it may truly be said that he *lived with the insane.* He was their companion, as well as their physician and friend. He studied closely their wants, their inclinations, their propensities, their habits. He analyzed their feelings, affections and intellectual faculties, as modified by disease, and thus penetrated deeply into the labyrinth of the psychology of insanity. Hence he became better qualified than any of his contemporaries to produce a complete work, practical as well as theoretical, upon mental diseases, or, more properly, those diseases which result in disordered manifestations of the mind. Other men may have excelled him in some departments of the study, as, for example, that of pathology; but no one, in our opinion, possessed the requisite general knowledge to so great an extent. His "Mental Maladies" is, therefore, as might have been expected, the most nearly perfect of any treatise on insanity hitherto published. There is no hesitation in saying that, particularly with the additions made by the translator, it is the most valuable work for the American practitioner now extant. It is to be hoped that it will find its way into the office of every physician in the country; and, moreover, that it will be studied with the attention to which its high merits entitle it, and which suffering humanity seems imperiously to demand.

Having thus expressed our opinion of the general character of the work, we shall proceed, peradventure in a manner somewhat desultory, to notice such parts as appear most important, or the most open to comment.

Those who are acquainted with the original, will, upon taking up the American edition, immediately perceive that several chapters are wanting in the latter. The translator, in his preface, thus explains the omission:—

> "All that portion of this Treatise relating properly to insanity, has been published entire; the remainder, referring, for the most part, to the statistics and

> hygiene of establishments for the insane, together with the medico-legal relations of the subject, have been omitted, as they would only serve to increase the size and expense of the volume, without adding materially to its intrinsic value."

We fully approve of the course of Dr. Hunt in this matter, excepting, perhaps, so far as relates to the portion upon the medical jurisprudence of insanity. American physicians and American jurists ought to have access to every treatise upon this subject.

The classification of mental disorders is, as yet, exceedingly imperfect. The system of the nosologists, especially in relation to the specific characters, appears to have been abandoned by the common consent of recent authors; or so far modified by each, as to make it correspond with his particular views. In this manner, that which once appeared to be brought to perfect methodical arrangement, has been again reduced to comparative chaos.

The classification of Esquirol is as follows :—

> "1. Lypemania (melancholy of the Ancients); delirium with respect to one or a small number of objects, with predominance of a sorrowful and depressing passion.
>
> "2. Monomania; in which the delirium is limited to one or a small number of objects, with excitement, and predominance of a gay and expansive passion.
>
> "3. Mania; in which the delirium extends to all kinds of objects, and is accompanied by excitement.
>
> "4. Dementia; in which the insensate utter folly, because the organs of thought have lost their energy and the strength requisite to fulfil their functions.
>
> "5. Imbecility, or idiocy; in which the conformation of the organs has never been such that those who are thus afflicted could reason justly."

He subdivides Monomania into the following species :—

1. Erotic Monomania; 2. Reasoning Monomania; 3. Monomania from Drunkenness; 4. Incendiary Monomania (Pyromania of Marc); 5. Homicidal Monomania.

The Lypemania and Monomania of Esquirol correspond with the Tristimania and Amenomania of Rush.

There is one description of insanity, which has of late years attracted more attention than formerly, and, by some authors who have written since Esquirol, has been placed in a distinct genus. This is moral insanity. Pinel undoubtedly refers to this disorder when he says, "I was not a little surprised to find many maniacs, who at no period gave evidence of any lesion of the understanding."

The close observation of Esquirol could not fail to open to his view the characteristics of this affection. Accordingly he says :

> "There are madmen in whom it is difficult to discover any trace of hallucination, but there are none in whom the passions and moral affections are not disordered, perverted, or destroyed."

Georget, one of the most distinguished of French authors upon mental diseases, says, "some individuals are presumptuous, desirous of undertaking everything and capable of applying themselves to nothing; others are extravagant and mobile in the utmost degree in their opinions and sentiments; many are susceptible, irritable, choleric, and passionate; some are governed by pride and haughtiness without bounds; a few are subject to vague anxieties, or to panic terrors."

Marc, Reill, Hoffbauer, Conolly and some others, have sufficiently recognized the symptoms of moral insanity, but it remained, we believe, for Dr. Pritchard, to isolate it from intellectual alienation, and place it as a separate division in his system of classification. He defines it in the following terms :—

> "Madness consisting in a morbid perversion of the natural feelings, affections, inclinations, temper, habits, mental disposition and natural impulses, without any remarkable disorder or defect of the intellect, or knowing and reasoning faculties, and particularly without any insane illusion or hallucination."

Dr. Ray, in his "Medical Jurisprudence of Insanity," gives the following vivid, and, in our opinion, very accurate description :—

> "The contrast presented in moral mania between the state of the intellectual and that of the moral faculties, is one of its most striking features. These patients can reason logically and acutely on any subject within their knowledge, and extol the beauties of virtue, while their conduct is filled with acts of folly, and at war with every principle of moral propriety. Their moral nature seems to have undergone an entire revolution. The sentiments of truth, honor, honesty, benevolence, purity, have given place to mendacity, dishonesty, obscenity and selfishness; and all sense of shame and self-control have disappeared, while the intellect has lost none of its usual power to argue, convince, please and charm. In nothing indeed is the intellectual soundness more strikingly evinced than in the ingenuity with which these persons endeavor to explain the folly and absurdity of their acts, and reconcile them to the ordinary rules of human action. By denying entirely some alleged circumstances in a particular transaction, adding a little to one and subtracting a little from another, and giving a peculiar coloring to the whole, they will convince the unguarded observer that there is some mistake about the matter,—that they acted precisely as any one else would under similar circumstances, and that they are the victims of misrepresentation and unkindness."

The number of patients afflicted with this malady who have come under our observation is not small. Some of them are perfect types of cunning and hypocrisy. With a pleasing exterior, plausible deportment, affable and insinuating manners, cultivated minds, and great colloquial powers, their society is so agreeable as to call from a stranger, or casual visitor, the exclamation, "what delightful company!" Yet no sooner has the stranger crossed the threshold on his departure, than all conceivable vituperation and abuse, all the vulgarity and profanity concocted in the purlieus of Billingsgate, and all the machinations of an evil spirit are directed either against him, or, more probably, towards the members of the household.

A thousand petty means, more easily imagined than described, are resorted to for the sole purpose of annoying, vexing and mortifying parents, brothers, and sisters. Money is squandered as if the patient were possessed of a Midas-touch, all claims to veracity are as completely annihilated as if there were no such thing as truth, and, Ishmael-like, these unfortunate victims of disease place themselves in sturdy opposition and hostility to the world.

This unfortunate condition of things in regard to the persons in question, is, as intimated above, the result of acquired insanity, and not of innate moral turpitude.

Magistrates and members of the legal profession, as well as physicians, ought fully to understand the peculiar character of this disease.

Some of the persons afflicted with it are among the most unfit of all mankind to be at large; yet, in the present state of things, it is difficult to convince the civil authorities that they should be subject to isolation.

It is proper to remark, before leaving this subject, that although we believe it possible for the moral nature to become distorted and diseased, so as to constitute insanity, while the intellectual faculties remain unimpaired, yet we do not recollect a case in which there was not *some* mental delusion or hallucination.

One observation more in regard to classification. It is highly probable that all present systems, which are based upon the principles of the Linnaean method, will ultimately be abandoned; that some future nosologist will perform for insanity, even more than was effected by Jussieu for Botany. Then, in the language of Dr. Hunt, in his annotations to Esquirol, page 30:—

> "The *intellectual*, *moral*, and *mixed*, will become the leading divisions of this mportant subject."

At page 42 of the translation of Esquirol, we find the following paragraph:—

> "The less depraved morals of the Anglo-Americans, is one of the causes, in consequence of which there is less insanity among them than elsewhere; as the reports of travellers prove, not less than the records of their own hospitals."

This gives us an exemption from the disease, which, how desirable soever it might be, does not accord with existing facts. This paragraph was written in 1816, when there was but one asylum in the United States exclusively devoted to the insane. Hence reports upon the subject were few and meager, and travellers through the country could not have access to data whereon accurately to estimate the number of the insane. The multiplication of institutions has *brought out* this afflicted class; and, by this and other means, it is ascertained that there are but few, if any, countries in which mental disorders prevail to a greater extent than in most of the thirteen States originally constituting the American Union.

Our author states as the result of his observations and research, "that the age which furnishes the greater number of insane, is, for men, that from thirty to forty years; whilst for women, it is that from fifty to sixty years; that among women, insanity appears earlier than among men, indeed, from twenty-nine to thirty years of age." And again, "the age most favorable to the *production* of insanity is from twenty-five to thirty-five years of both sexes."

From statistics gathered from the reports of American asylums, it appears that of 4,684 patients received into twelve of those institutions, the ages at the time of admission, or during some period of their residence, were as follows:—

Under 20 years,	259	From 60 to 70 years,	264
From 20 to 30 years,	1,426	" 70 " 80 "	89
" 30 " 40 "	1,231	" 80 " 90 "	7
" 40 " 50 "	893	" 90 " 100 "	1
" 50 " 60 "	534		

The maximum is between twenty and thirty years. The number in that decade is to the number between thirty and forty, as 1·15 is to 1, or as twenty-three to twenty.

Had the ages been taken at the time of the first invasion of insanity, the evidence of the predominance of the disease between the ages of twenty and thirty, in this country, would have been more positive. In some instances the means of determining the age at the period in question was possessed, and, having availed ourselves thereof, the results are as follows:—

Of 2,336 patients there were

Under 20 years of age,	287
Between 20 and 30	819
" 30 " 40	515
" 40 " 50	360
" 50 " 60	169
Between 60 and 70	75
" 70 " 80	28
" 80 " 90	1
Unknown,	82

Thus, 819 were attacked between twenty and thirty years, and 515 between thirty and forty. These numbers are to each other as eight to five, or as 1·6 to 1.

Hence it is undoubtedly true that, in the United States, the age most prolific of insanity is from 20 to 30 years.

In discussing the comparative prevalence of mental disorders in the two sexes, Esquirol affirms that, in France, it is most frequent among females, and accounts for the fact in the following manner:

> "The vices of education adopted by our young ladies, the preference given to acquirements purely ornamental, the reading of romances, which gives to the intellect a precocious activity and premature desires, together with ideas of an imaginary excellence that can never be realized; the frequenting of plays and society; the abuse of music, and want of occupation; are causes sufficient to render insanity most frequent amongst women."

From data, furnished through a variety of sources, and from several countries, he finally derives the following inferences:

> "1. That in a very considerable number of insane people, selected from different countries, and in different conditions, the disparity in numbers between men and women is much less considerable than is usually supposed.
>
> "2. That this difference approaches, very nearly, the proportion which exists between the two sexes, in the general condition of the population.
>
> "3. That this difference is not the same in all countries."

In the United States, the disease is unquestionably far more prevalent among men than among women. Of 12,203 patients received into twelve institutions in this country, 7460 were males, and 4743 females—the former exceeding the latter in the proportion of 127 to 100. It is hardly reasonable to suppose that this disproportion exists between all the insane—the insane strictly speaking—in the country. Many of the cases included in the above were Mania à Potu, which, in the opinion of most physicians, ought not to be classified with insanity. But Mania à Potu is abundantly more common with men than with women. Could these cases, therefore, be abstracted from the foregoing numbers, the result would be essentially modified, although the number of men would still be much the larger of the two.

The extensive prevalence of the habitual and excessive use of intoxicating liquors, the general struggle for wealth, the unstable policy of our government, which, with other causes, produces serious fluctuations in trade and commerce, and ultimately the most disastrous financial revulsions and pecuniary embarrassments, sufficiently explain this preponderance of insane men over that of insane women in America.

In his article upon causes, our author makes the following remarks, which, *en passant*, are not particularly complimentary to the social condition of the French.

> "The ties of marriage are mere pretences, which are formed by the wealthy, either as a speculation, or to gratify their self-love; and which the common people neglect, through disdain for the clergy, indifference and libertinism. These deplorable facts have prevented me from taking an account of the marriage state, of celebicy, or widowhood, among women who enter our hospital, and consequently from being able to appreciate, among them, the influence of marriage in the production of mental alienation."

Of 978 female patients admitted into eleven American Asylums, 450 were single, 386 married, and 142 widowed. Of 5322 patients of both sexes received into twelve institutions in the United States, 2777 were single, 2120 married, 425 (135 men and 290 women) widowed. It therefore appears that in this country, at least, there are among the insane many more single than married. Of the widowed insane, the females predominate over the males, according to the above, in a proportion of more than 100 per cent.

The following observations in relation to the comparative influence of the two great divisions of causes are extracted from page 48.

> "Moral causes are much more frequent than physical. A comparison of the record of moral causes, kept at my establishment and at the Salpêtrière, proves this, and the reports which I have since made at the same hospital, and at Charenton, confirm it.
>
> "The memoir, read by Pinel at the Institute in 1807, also demonstrates the same fact.
>
> "A report made in Pennsylvania in 1812, gives the same result, since among fifty insane persons from whom their account was made up, thirty-four had become so as a result of moral affections, and sixteen from physical causes.
>
> "Experience has demonstrated the same thing to Mr. Tuke, founder and director of the Retreat near York; and, in fine, the same has been everywhere observed, because man is everywhere the same."

The initiatory proposition is based, as appears by the context, upon premises of so limited a scope as hardly to carry with it the force of demonstration. Investigations prosecuted since it was first published (1816), have rendered its truth very doubtful, if they have not proved it to be absolutely untrue.

"Moral causes," says Belhomme, "produce many cases of insanity; but if we attentively study the physiological and sympathetic relations of the different organs, we shall be convinced that physical causes ought to predominate." He also asserts that in four hospitals, the statistics of which he consulted, the proposition was coincident with this inference. At the Bicêtre, in 1821, of 764 patients, the disease of 516 was traced to physical, and of 258 to moral causes. At Salpêtrière, the same year, of 1726 patients, 900 (including 201 in whom there was a hereditary predisposition), were from physical, and 609 from moral causes. Again, at the hospital first mentioned, during the three years intervening between 1821 and 1825, of 1095 patients, 736 originated in physical, and 202 in moral causes; and at the last mentioned, during the same period, of 1412 cases, 423 arose from the former and 306 from the latter class of causes. The remainder included the senile insane, those in whom a predisposition was hereditary, and those the cause of whose malady could not be ascertained. Finally, of 8272 cases admitted into the two hospitals in question, from 1825 to 1833, inclusive, 5035 were attributed to physical, and 2659 to moral causes; and in 578 none was assigned. At the York Retreat, of 469 cases, the predisposing causes were 257 physical, 48 moral, and in 164 none known to exist; of the exciting causes, 121 physical, 135 moral, and in 159 none known.

Of 4089 patients whose cases were treated at five American institutions, the disease is supposed to have originated from physical causes in 2026, from moral causes in 1445, and in 618 no cause was ascertained. Nearly all the physicians of the American Asylums believe in the paramount influence of physical agents in the production of this disease. Inasmuch as the remote as well as the immediate causes are very frequently involved in doubt, both observation and opinion may be somewhat influenced by preconceived theory.

In reference to cures, Esquirol writes as follows:

> "From the reports made in different establishments or hospitals for the insane, we conclude: 1st, that the absolute cures of the insane are about one-third; 2d, that the number of cures varies from a fourth to a half. This difference depends upon the peculiar circumstances of locality, maladies and treatment; 3d, that the cures are more common in France than in England (they are much more rare in Germany and Prussia). Thus, whatever display the English may make of their success in the treatment of the insane, we can oppose to it still greater success in France."

There is an article in the American Journal of the Medical Sciences, for April, 1843, in which are reported the results of the treatment of *one hundred and twenty thousand, seven hundred and ninety-six* cases of insanity, treated in sixty-three asylums, of which seventeen are in the United States, twenty in England, five in Scotland, twelve in Ireland, three in France, three in Italy, two in Germany, and two in Holland. Of the whole number of patients, *forty-nine thousand and forty-six* were cured,—a proportion of *forty and six-tenths to the hundred.*

The per centage of cures of the aggregate number of patients in the institutions of each country, respectively, is as follows:

United States	41.13	France	36.71
England	39.21	Italy	50.10
Scotland	42.82	Germany.	30.79
Ireland	45.72	Holland	38.27

There are, in Italy, many cases of this disease arising from a peculiar endemic influence. The general curability of these sufficiently accounts for the high per centage for that country. The other variations from a medium per cent. may, perhaps, be explained in part by the diversity of conditions and restrictions under which patients are admitted into the several institutions.

It will be perceived that an average of all these proportions would be considerably higher than he proportion fixed upon by Esquirol as "absolute cures." It is probable that, were abstraction made of all cases which, though discharged cured, may have relapsed so soon that their cure was not *absolute*, the results of the foregoing table would very nearly approximate the deduction of our author.

From the chapter upon "Prognosis," we make the following extracts, the positions in which are undoubtedly accurate—

> "Imbecility and idiotism are never cured.
>
> "Monomania and lypemania are cured, when they are recent, accidental, and do not depend upon an organic lesion.
>
> "Mania is cured more frequently than monomania and lypemania.
>
> "Acute dementia is sometimes cured, chronic dementia very rarely, senile dementia never.
>
> "Hereditary insanity is cured, but relapses are more to be feared than in accidental insanity.
>
> "Chronic insanity is cured with difficulty, especially after the second year. This difficulty is proportioned to the time that the predisposing causes have been operating on the system prior to the outbreak of delirium.
>
> "Whatever may be its duration, we may hope for the cure of mental alienation so long as marked, yet curable derangements exist in the functions of nutrition."

That portion of the work devoted to "Treatment," both physical and moral, is replete with interest and valuable precept, although its precepts vary, to a considerable extent, from the practice in this country. It is difficult to make suitable selections therefrom, consistent with our limits. The whole should be read and studied. As the subjoined extract contains the general principles by which the physician should be governed, we esteem it the most appropriate of any for quotation in this place:—

> "To establish the basis of a certain therapeutic treatment of mental alienation, it would be necessary to understand all the general and individual causes of this malady; to distinguish, by certain signs, the source from whence all disorders spring; to determine whether the physical reacts upon the moral, or the moral upon the physical; to establish the varieties of insanity that are cured spontaneously; those which call for moral aids; those which require medication; and finally those which require mixed treatment. What accidents have befallen, what obstacles opposed those physicians, who have been unwilling to see but one disorder in all the forms of insanity that they have been called to treat! They inferred that, delirium being symptomatic of almost all maladies at the approach of their fatal termination, insanity might also be symptomatic. They were not ignorant that there were forms of insanity evidently sympathetic: they knew that a thousand predisposing and exciting causes lead to insanity; but having regard only to the most apparent symptoms, they have permitted themselves to be directed by the impetuosity, violence, and changefulness of the symptoms, and neglected the study of the causes of insanity, and the relations which they bear to the symptoms. Drawn away by theories, some have seen nothing but inflammation; have charged upon the blood the production of insanity, and employed bleeding to excess. Others believed that the bile was the source of irritation, and that it restrained and interfered with the due performance of organic functions. They were prodigal of emetics and drastic purgatives. Others still, have taken account only of the nervous influence, and employed antispasmodics in excess. *All have forgotten, that if the practitioner ought always to have before his mind great general truths, systematic views, which are to predominate, and which constitute medical science; art should confine itself to the most careful study of the circumstances and symptoms, which will but acquaint us with the causes and seat; in a word with the nature of the malady which we are to combat.*
>
> "When called to visit an insane person, after having acquired a knowledge of his history, together with the predisposing and exciting causes of his attack, we

should inquire if there are no urgent indications to fulfil. To ascertain the cause of the malady will, in general, furnish a clue to the best mode of treatment. To recall the menses where suppressed, to re-establish old ulcers, to provoke cutaneous affections, and to insert issues, if the patient had formerly been accustomed to them, will be peculiarly proper. If there is active excitement attended with plethora, these symptoms must be controlled by sanguine evacuations, tepid baths, and emollients long continued; together with cooling and laxative drinks. Sometimes it will be necessary to apply to the skin rubefacient derivatives. At the same time the strictest attention should be paid to the diet and regimen of the patient. Treated as an acute disorder, almost always at the expiration of eight, fifteen, twenty-one, or thirty days, there is a remission, and sometimes a very marked intermission. Then, in connexion with those moral means appropriate to the character of the delirium, we must set ourselves to combating those material causes, whether hygienic or pathological, which had preceded and induced the malady; in every case following the individual indications. Let it suffice to point out a few of these indications. A man becomes insane who has been subject to hemorrhages which no longer exist. The physician succeeds in establishing this evacuation, and at the same time in restoring reason to his patient. A cutaneous affection disappears; an ulcer dries up, and mania or monomania bursts forth. On recalling the disorder of the skin and reopening the ulcer, it is almost certain that the insanity will cease."

The following remarks we also consider as eminently valuable:—

"On the discovery of the circulation of the blood, it was believed that we had discovered the cause of every disorder, and a remedy for all ills. Blood was shed abundantly. The blood of the insane was the more freely shed, as by bleeding them to faintness it was believed that they were cured. This treatment was extended to all the insane. In every hospital there was established what was called the treatment of the insane on this principle; that the blood being too abundant, and too much heated, ought to be evacuated and cooled. Besides, in the hospitals of France, where some attention was paid to the insane, in spring and autumn they bled them once or twice, and bathed them in cold water; or cast them, bound hand and foot, into a river or reservoir. If a few victims of such gross mismanagement escaped, they cried out, a miracle! Such was the prejudice, not long since, even at Paris, in favor of bleeding, that we were accustomed to receive pregnant women, who were bled by way of precaution, before being sent to a house where bleeding was proscribed. Excess in this respect has sometimes been so great, that I have had in charge an insane man who had been bled thirteen times in forty-eight hours. Pinel set himself against this abuse, and cites examples which ought to be presented to the observation of all physicians. *I can add, that I have many times seen insanity increase after abundant menstrual flows, after hemorrhages, and after one, two, and even three bleedings. I have seen a state of sadness pass into mania and fury, immediately after bleeding; and dementia to replace, reciprocally, the condition of mania.* I do not believe it necessary to proscribe blood-letting in the treatment of insanity. It is indispensable in plethoric subjects, when the head is strongly congested, and hemorrhages, or habitual sanguine evacuations have been suppressed. At the commencement of insanity, if there is plethora, if the blood rushes violently to the head, if some habitual hemorrhage is suppressed, we bleed largely, once, twice, or thrice; apply leeches to the jugular veins and temporal arteries, and cups to the base of the brain. At a later period, sanguine evacuations are local, and employed as revulsives, or as supplementary to suppressed evacuations," etc.

In connection with the above we add the following paragraph from the translator's note to the chapter on treatment:—

"It is hardly necessary to add, that, while great caution is required in the use of depressing agents, inflammatory action is in every instance to be promptly met by the use of active and efficient depletion, both topical and general, commensurate with the severity of the case. *The most intense nervous excitement, however, which is sometimes mistaken for cerebral inflammation, can never require this treatment. It is in view of errors of this sort, that the general practitioner is recommended to guard against depletion, and its too often disastrous consequences.*"

It is to be feared that these "disastrous consequences" have but too frequently been the result of venesection, in mental disorders, as it has been practised in this country.

The prevailing doctrines upon the subject have been derived from Dr. Rush, who, in accordance with his general theories, and his practice in other diseases, bled, in mental affections, somewhat upon the plan of Bouillaud, in inflammatory rheumatism, "*coup sur coup.*"

The attempt to combat the opinions, and the conformable practice of one whose professional rank is so well established, and, in many respects, so deservedly high, as that of the late Dr. Rush, may appear presumptuous. Being, however, confirmed in the belief that, so far as relates to the subject in question, his opinions and practice were erroneous, it is but a matter of duty that we oppose them.

General bleeding is but little resorted to in the Asylums of either England or the United States ; and, in the reports emanating from several of the latter, extensive depletion by this means is condemned.

The following remarks by Dr. Woodward, are from the "Twelfth Annual Report of the State Lunatic Hospital, at Worcester" (Mass.).

> "All agree that depletion, by which I would be understood general bleeding and active cathartics, is not favorable in insanity, as it rarely affords more than temporary relief, and frequently produces marked injurious effects. When blood-letting has been employed freely and frequently in active mania, the only form of insanity in which it is commonly used to excess, if the excitement, for a short period, an hour or two, and sometimes a day or two, abates, it is generally renewed with increased violence, and under circumstances far less favorable for the benefit of other remedies. The indications for active depletion are usually the *effect* and not the *cause* of excitement; they grow out of the perpetual activity of the physical and mental powers, and are not the cause of it. By this course of remedies, the strength and energy of the system is reduced, the nervous system is rendered more susceptible, and the active violence of the symptoms is increased. The effect of great loss of blood is often to produce pain in the head, a sense of stricture, as if a fillet was tied round it tightly, ringing in the ears, and noises in the head which lead to false perceptions of sound, and illusions liable to result in permanent insanity."

In regard to moral treatment, Esquirol commences with this proposition :—

> "Whatever can act upon the brain, either directly or indirectly, and modify the principle of thought ; whatever can control and direct the passions, should be the object of moral treatment."

After having discussed the propriety of isolation, as the first question to be settled in this branch of the subject, and arrived at the conclusion that separation from relatives is generally the proper mode of action, he proceeds as follows :—

> "Where shall we isolate the patient? We have already said that the insane man should be placed in an institution devoted to the treatment of mental dis-

> eases. We prefer a house of this kind to a private one, where our object is effected at great expense. Partial isolation rarely succeeds. It presents many inconveniences, which we would wish to shun, by withdrawing the insane from their accustomed places of abode; and offers very few of the advantages of a house in which many patients are assembled.
>
> "The strongest objection that can be urged against establishments devoted to this kind of treatment, is founded upon the frightful effects that may result from mingling with companions in misfortune. I reply, that, generally, it does not injure them,—that it is not an obstacle to a cure—that it is a valuable means of treatment, because it obliges the insane to reflect upon their condition, because that, common objects no longer making an impression upon their minds, they are diverted from themselves by the extravagances of their companions. They are obliged to live out of themselves, and to occupy their thoughts with what is going on around them;—to forget themselves, as it were, which is in itself a means of cure. The desire of being free, and the need of seeing parents and friends, grow out of the privation of these privileges, and replace imaginary and unreasonable wants and desires."

Like most authors who have recently written upon moral treatment, Esquirol believed manual labor to be the most salutary and useful of all the means generally resorted to in public institutions.

> "Corporeal exercises, riding on horseback, the game of tennis, fencing, swimming and travelling, especially in melancholy, should be employed, in aid of other means of treatment. The culture of the earth, with a certain class of the insane, may be advantageously substituted for all other exercises. We know the result to which a Scotch farmer arrived by the use of labor. He rendered himself celebrated by the cure of certain insane persons, whom he obliged to labor in his fields.
>
> "The means of diverting the mind," says he, page 81, "are, after labor, the most efficacious agents in the cure of the insane, but we cannot rely upon the success of those which exalt the imagination and passions.
>
> "A mind at all accustomed to reflection, is astonished that theatrical representations should formerly have been permitted at Charenton; and a German author regards the multiplication of theatres as one of the causes of the great number of insane people in Germany. The maniacs could never be present at the theatrical representations of Charenton, the monomaniacs rarely,—and imbeciles could not be benefited by them. Those to whom the spectacle could be useful were already cured, and it would have been more profitable to restore them to liberty than to shut them up for three hours in a place, confined, heated and noisy, where everything tended to produce cephalalgia. Thus there were few representations that were not signalized by some violent explosion of delirium, or by some relapse. This mode of amusement, by which the public were imposed upon by being informed that the insane themselves played comedies, never obtained the approbation of the physician of the establishment. Royer-Collard exerted himself vigorously against it, and was ultimately successful in bringing it to an end. I once accompanied a young convalescent to a Comic Opera. He everywhere saw his wife conversing with men. Another, after the space of a quarter of an hour, felt the heat in his head increasing—and says, let us go out, or I shall relapse. A young lady, being at the Opera, and seeing the actors armed with sabres, believed that they were going to assail her. All this happened, notwithstanding I had selected both the individuals I was to accompany, and the pieces that were to be acted. A theatrical spectacle can never be suited to the condition of the insane, and I much fear, not even to that of convalescents.
>
> "I have often employed music, but have rarely been successful with it. It brings peace and composure of mind, but does not cure. I have seen those whom music rendered furious; one because all the tones appeared false; another, because he thought it dreadful that people should amuse themselves near a wretch like him. Finally, I believe that the ancients have exaggerated the

effects of music, as well as many other things. The facts reported by the moderns are not sufficiently numerous to enable us to determine the circumstances in which music may be useful. However, it is a valuable remedial agent, particularly in convalescence. It ought not to be neglected, however indeterminate may be the principles of its application, or uncertain its efficacy."

In allusion to the value of kindness and sympathy on the part of the physician to the insane, as well as of him who undertakes the treatment of other maladies, our author holds the following language, no less appropriate than beautiful:—

"I have published several (observations) in my dissertation on the passions, and proved, by facts, how valuable is moral treatment, whether we desire to prevent the outbreak of an attack of insanity, or are called to treat the malady, or propose to confirm a convalescence. This treatment, besides, is not confined exclusively to mental maladies—it is applicable to all others. It is not enough to say to the sick, courage, courage, you will be better. A feeling heart must dictate these solacing words, that they may reach the mind and heart of him who suffers. How happens it, that in an age in which we have so triumphantly established the influence of the moral over the physical man, that these researches upon man in a state of disease have not been extended?"

We have heard persons who were but little conversant with insanity, and never concerned, either directly or indirectly, in the treatment of the insane, stoutly endeavor to maintain that they could, by reasoning, convince lunatics of the errors of their delusions. It requires but little experience in the management of the inmates of an asylum, to furnish conviction of the entire futility of such an attempt.

"To expect to cure the insane," says Esquirol, page 79, "by syllogisms and reasoning, indicates little knowledge of the clinical history of mental alienation." 'I understand you perfectly,' said a young lypemaniac, 'and if I were convinced, I should be cured.' Said another, 'I know what I ought to do, I would do it; but give me the power, the ability which is wanting, and you will have cured me.'

"It has been supposed that the moral treatment applicable to maniacs, consisted in reasoning and arguments. This is a chimera. Maniacs cannot sufficiently control their attention, to hear and follow the reasonings that are offered them. The moral treatment consists in seizing their attention, controlling their understanding, and in gaining their confidence."

There is but little said upon the subject of corporeal restraints in the work of our author. Having learned a valuable lesson from the conduct of his teacher, a lesson the truth of which was confirmed by his daily personal observation. Esquirol discarded from the wards of the institution under his care, the most onerous and objectionable appliances for the confinement of the body and limbs, and resorted to the milder forms much less frequently than was the custom anteriorly to his time. Since his work was published in the original, the attention of persons concerned in the management of lunatics has been more generally directed to this subject; much discussion thereupon has been awakened, and the result has undoubtedly been favorable to the insane, and promotive of the cause of humanity.

As, perhaps, a natural consequence of the tendency of the human mind to recoil from one extreme to its opposite, the startling doctrine has been broached in England, that, in the treatment of lunatics, no mechanical means of restraint should ever be placed upon their persons : that these implements, from time immemorial believed to be essential requisites in asylums, are worse than useless, absolute evils, and hence should be abandoned entirely and for ever. As the pioneers in any work of reformation rarely have a clear view of the ultimate tendencies of their doctrines, Pinel never looked for the dawning of that day in which so universal a disenthralment of the objects of his care should be proclaimed. It is doubtful whether, if he were now living, this course of his co-laborers would receive the sanction of his better judgment.

Among the insane, there are some who are disposed voluntarily and in various ways to mutilate their bodies. There are others who, in the uncontrollable violence of a spasm, plunge their teeth into the flesh of their hands, arms, and other accessible portions of the body. In these cases the hands must be confined, or the patient subjected to the constant surveillance, both by day and by night, of one, and in some instances two, attendants. We are strongly inclined, and that too while consulting the best interest of the patient alone, to give preference to the former alternative. It would be difficult to establish a supervision which, in some of the cases alluded to, would be sufficiently constant to insure them from self-injury. And were it possible, the expense necessarily incurred would be such as no institution, and but very few individuals, could afford.

There is another class of patients in the treatment of whom mechanical confinement of the limbs has very generally been practised. These are the suicidal. That this plan has too extensively, too generally been adopted towards such patients, is a proposition which has, we believe, been satisfactorily demonstrated. It is most unquestionably true that with many suicidal persons, confinement of the hands would aggravate the tendency, the effect of which that confinement is intended to prevent. The patient cannot, as a general rule, fail to know the purpose of his restraint. He looks upon the muffs which envelope his hands as the only obstacle preventing the consummation of his wishes. They act as a constant reminder of his fatal purpose, a continual prompter to its accomplishment. His mind is thus unremittingly kept "nerved" to that degree which, in every human being, must be gained before he can sever the cord which binds him to existence. Hence he seizes the first opportunity in which a temporary release of his limbs may enable him to effect his end.

The following truly remarkable fact in connection with the disuse of restraints in cases accompanied with a propensity to suicide, is related in the report for 1843 of the Bethlem Hospital, in London :—"From 1750 to 1770, when every patient was under restraint, the suicides were in proportion of 1 to 202, whereas, during the last twenty years (when restraints have been but little used), the proportion has been only 1 in 963." Thus the actual amount of self-destruction was nearly five times as great under the old system of bodily confinement, as it is under the present method of freedom from straps and strait jackets.

The very means resorted to for the prevention of self-destruction have sometimes been the instruments of death. "A woman at the Salpêtrière (says Esquirol), had been fastened upon her bed by means of this garment. During the night she threw herself from it, and her body, resting with all its weight upon the waistcoat, cempressed the trachea, and the patient was asphyxiated. A patient, confined to his bed, succeeds in throwing from his couch every portion of his bedding, and is suspended and strangulated by the camisole."

A patient in one of the American Asylums being confined to his room with his hands in the leathern muffs, mounted into the window seat, and thence precipitated himself, head foremost, upon the floor, and was thus killed. It has been supposed by many, that the presence of another person, even if that person be a fellow patient, is a certain preventive of suicide. But this resource is not always sufficient. We know a case in which a female hung herself in the night within three feet of another patient, though the latter, at the time, was awake. Dr. Kirkbride has most truly remarked that suicidal cases "give more anxiety to the medical officers of insane hospitals than all others put together." It is greatly to be desired that some effectual method of entire prevention of self-destruction should be discovered. Dr. Woodward, of the Massachusetts State Hospital, is in the habit, as we understand, of conversing freely with his suicidal patients, upon the subject of their fatal propensity, and, if possible, obtaining from them a pledge that they will not yield to it. This pledge, he thinks, they will generally keep inviolate. Dr. Bell, of the McLean Asylum, has a different opinion. He thinks that no confidence can be placed in a promise of this kind. It is probable that in many cases, although a pledge might be given with all sincerity, and with the firm intention of keeping it in good faith, the impulse to suicide would, at times, be so powerful as entirely to overcome the moral force by which alone adherence to promises can be sustained.

The following plan of prevention is suggested by Esquirol:

> "These patients should not be placed in isolated cells, but in public halls, where they may be better watched, both by their fellow patients, and the attendants. They should never be out of sight. It is to this attention, and to the advantage of having all the apartments of this class of patients upon the ground floor, that we are indebted, at the Salpêtrière, for having scarcely any suicides; since, among eleven or twelve hundred insane persons, of whom one hundred, at least, have made attempts upon their lives in the course of ten years, only four suicides have been committed; whilst, everywhere else, the number is far more considerable."

This method appears to be rapidly coming into favor. It is already adopted in many of the European establishments, and is about to be introduced into some of those on this side the Atlantic. If, under this arrangement, an attendant should be kept on watch during the night, and a sufficiently guarded oversight be maintained during the day, it would appear as if positive security against suicides might be obtained. Even yet, our confidence, or rather our want of confidence in human vigilance, is such, that we cannot think the object would be gained without, in a few cases, perhaps one in thirty of the suicidal, resorting to some method of confining the hands.

Of patients whose disease assumes the form of mania, accompanied by high excitement, a class which, in former years, were very generally subjected to restraint, we are well satisfied that a very large majority can be better managed without these appliances. A room with a guarded window, a dress of strong material, with the care of a suitable attendant, who shall maintain a proper degree of watchfulness when the patient is not confined to his room, are generally altogether adequate for the well-being of all concerned.

The simple presence of muffs, straps, and other apparatus intended for the same purpose as these, is sufficient to create no little excitement within the wards of an institution for the insane. It is greatly desirable that everything around the patients should be made to wear as cheerful and comfortable an aspect as possible; that all things which remind them of their situation, which bring upon them the harrowing conviction that they are not like other men, that they are no longer what they once have been, should be withdrawn from their observation. It is better, when practicable, to submit to the *less* inconveniences attendant upon the absence of restraints, than to contend with the *greater* which follow from their presence.

The character of the persons employed to take the immediate care of the insane has a very important influence in determining the extent to which confinement of the limbs is expedient. There is this difference in attendants: that, with a given class of patients, while one would find it necessary to resort to restraints daily, and even then be in the midst of continual disorder, confusion and uproar, another would preserve a satisfactory degree of order and tranquillity, without ever having recourse to those means of confinement. Moreover, the latter would have an easier task than the former, and perform it with less harshness and severity. Nature qualifies men for all the departments of duty in life. A peculiar talent and a peculiar tact are requisite to the good government of those whose reason is disordered.

People concerned in the management of institutions for the insane in this country, have not, hitherto, been sufficiently impressed with the importance of employing well qualified attendants. Generally, all the requisites demanded have been good muscular development and a willingness to perform all sorts of drudgery. In England, this subject has, within a few years past, awakened no inconsiderable interest; and, in 1842, a society was formed in London, with the Earl of Shaftsbury at its head, one of the promulgated objects of which is

> "The advancement of the moral, intellectual and professional education of the immediate attendants on insane patients."

We wish it all success, and hope that its example may soon be followed upon this side the Atlantic.

If the attendant be ignorant—and we have known many who could neither read nor write—he will be looked upon by the patients as a menial—as a servant, and nothing more than a servant. Hence he will receive from them imperious language, with, perhaps, such taunts as he may construe into insults, which he is not disposed to brook. Ignorance is certainly not less liable than intelligence to be accompanied by a disposition to domineer, and being

> "Clothed in a little brief authority,"

the attendant retaliates by playing the tyrant, and thus effectually puts an end to harmony and good order. The educated attendant commands the respect of the patients, and is considered by them as a companion and friend. They listen to his counsel, and follow his advice. With a somewhat better understanding of good breeding and true politeness, with more accurate views of the nature of insanity and the capability of more thoroughly understanding the relation between himself and the persons confided to his care, he is less liable to recriminate, makes greater allowances, curbs his temper, and heals, by silence or soothing, a breach which might easily be enlarged by an opposite course of conduct. The contrast between the results of their systems of police is greater than could easily be imagined by one who has not observed them. These are general rules, which, like most others, have their exceptions. Finally: it is our settled conviction, that if asylums be made what they ought to be; if they be furnished, as far as possible, with the comforts and conveniences of civilized domestic life; if the moral treatment, diversified as it should be with a variety of resources for recreation, amusement and labor, be active and energetic; if the attendants be kind in disposition, sufficiently refined in manners and cultivated in intellect and morals, it will not be found either necessary or beneficial to restrain the limbs of more than one patient in a hundred. We cannot, however, subscribe to the doctrine that the true interests of the insane are best subserved by an absolute and unconditional abolition of the use of restraining apparatus.

In connection with this subject, it may not be inappropriate to make the following extract from Esquirol:—

> "The insane are but grown up children; children, too, who have received false notions and a wrong direction. So many points of resemblance do they bear to children and young persons, that it will not be surprising if both one and the other should be governed on similar principles."

For years before reading the work of Esquirol, we had entertained the opinions here advanced, and frequently expressed them when the insane were made the subject of conversation. From the striking similarity mentioned, we inferred that persons who had been accustomed to teaching school would make the best attendants; an inference the truth of which we have since seen verified.

Among those portions of the work the ideas contained in which have been either essentially modified, or demonstrated to be wholly untrue, by researches prosecuted at a period subsequent to the time at which they were promulgated, some of the remarks relative to the pathology of the disease may perhaps be included.

> "The minute and detailed description of the alterations and organic lesions observed in the post-mortem examinations of the insane, would be too long, and the less necessary, as they offer nothing of a satisfactory nature.
>
> "Many post-mortem examinations of the insane have revealed no alteration, although the insanity may have persisted for a great number of years."

After the results of the necroscopic examinations of later years, particularly those of Mr. Davidson, at the Lancaster Asylum, and Mr. Lawrence, at Bethlem, it can hardly be truly asserted that "they offer nothing of a satisfactory nature," although these investigations may not have led to those positive truths which it is desirable to obtain. Again, it is doubtful whether, if the examinations be conducted by a profound pathologist, there are "*many*" cases in which no cerebral lesion is found, if the insanity "have persisted for a great number of years."

Whoever may read the subjoined extract, and adopt the sentiments therein as applicable to the termination of insanity in the United States, will be led into an important error—

> "Half of the insane, whatever may be the character of the delirium, but more particularly monomaniacs who die, are paralytic.
>
> "These individuals suffer more or less embarrassment in the articulation of sounds; though their minds are sometimes but slightly deranged at the commencement of the malady. After some months, or a year, if they have not gained in flesh, they become very lean, grow feeble, walk with difficulty, and incline ordinarily to the left side. The dejections become involuntary, without being more liquid. There is incontinence of urine; embarrassment of speech increases, and the vital forces diminish, although they may take exercise, and the appetite be voracious.
>
> "From the time that they take their bed, gangrenous eschars form at the coccyx, or the trochanters, heels and elbows. This humid gangrene makes rapid progress, and the bones are soon denuded. Fever sets in; epileptiform convulsions supervene; the members are livid, and very cold; the pulse is no longer perceptible, and the patients die."

When writing the foregoing, the author probably had in view not only those patients who die of ordinary paralysis, but such as labor under a disease, at that time undescribed, and now known as "The Paralysis of the Insane"—the "Paralysie Générale" of the French.

At a later period of his life, and in a subsequent chapter of his work, the author wrote more particularly upon this disorder, but for a more full and elaborate account of it the profession is indebted to Mr. Calmeil.

Neither time nor space will now permit us to enter into a discussion of this subject as we would wish; we shall therefore limit ourselves to a few of the most important facts connected therewith.

The distinguishing features of the paralysis peculiar to the insane, are, 1st. Defective action of the muscles of locomotion. This, at first, is generally very slight, amounting to nothing more than an instability of gait, or tottering, or, at most, a sudden yielding of the knees beneath the weight of the body, the patient partly falling, but again recovering himself and pursuing his progress. It afterwards increases, and sometimes entirely destroys the ability to stand.

2d. Defective action of the organs of speech. Words are uttered indistinctly, and, at times, so confusedly as not to be understood. It not unfrequently occurs that, in attempting to speak a particular word, the patient finds it impossible to pronounce any portion of it.

3d. Exalted ideas of station, riches and power. Persons affected with the disease generally imagine themselves either as one of the sovereigns of the earth, or as having command of inexhaustible stores of wealth.

4th. It is generally, if not always, incurable.

5th. The pathological lesions are, thickening and opacity of the meninges, with serous effusions between and beneath them; their adhesion, by cord-like attachments, to the brain; and a degeneration and discoloration of the cineritious substance of the latter.

Death comes either very suddenly, from cerebral congestion or epileptiform convulsions; or lingers long, until, from a generally arpdeved condition of the secretions, gangrenous eschars, and sloughing of the flesh from the bones, and, sometimes, absolute loss of muscular action in nearly all parts of the system, the poor, unfortunate patient appears but little more than a motionless mass of corruption.

It is a remarkable fact, that while this affection is so prevalent in France as to have induced Esquirol to assert that "one-half of the insane die paralytic," it is almost unknown in this country. Dr. Bell, of the McLean Asylum, mentions "twelve or fifteen well-marked cases" which have been under his care.

The writer has had seven cases under treatment, neither of which (a fact which is also stated by Dr. Bell in regard to those just mentioned) was cured.

Insanity is generally looked upon as the most fearful of all maladies to which the human race is subject. It is a disease almost unknown in savage life; but as man progresses in the path of civilisation and refinement, it gradually increases in frequency, and its greatest prevalence is in those nations called, by the geographers, enlightened.

Unfortunate as is this fact, and unconsoling as is its evidence, it is easily explained. The thousand wants which wait upon man in cultivated society, and the intensity of action, both bodily and mental, which is requisite to supply them; while, at the same time, the susceptibility of the nervous system is so augmented by education and luxury as to render him less fit to sustain the arduous struggle; the abuse of stimulants; the multitudinous doctrines in politics, morals and religion, and the ardor,—may we not say madness—with which they are maintained and opposed;—these are the sources whence originate this direful disease.

We cannot complete our extracts from Esquirol with a more appropriate or useful passage than the following:—

> "We should avoid marriages with persons descended from insane parents. The education of man begins in infancy, and we should guard against the recital of such stories and fables to children as disturb the brain or painfully excite the imagination. While cultivating the mind, we should at the same time form the heart, and never lose sight of the fact, that education consists less in what we learn, than in correct habits of mind, feeling and action. If education is neither religious nor moral; if the child meets with no opposition to his wishes or caprices; if every one yields to his desire, how will he familiarize himself to the difficulties with which life abounds? We should not force the principles of feeling and intelligence by early fatiguing the brain with lessons of inordinate length. We should avoid errors of regimen, which often, at the tenderest age, predispose to insanity. We should control and direct the passions of the young.
>
> "The education of those who are born of parents already insane should be less devoted to the cultivation of the mind than the strengthening of the physical powers. The preceptor, informed beforehand of the mental state of their parents, and the wanderings of their passions, will educate his pupils with reference to this knowledge,—will moderate their undue ardor of mind, check their wayward propensities, and fortify them against the seductive influence of the passions; whilst the physician, aware of the physical causes which have provoked the disease in the persons of their parents, will prevent the development of these causes, or diminish their deplorable effects, by regimen and medicines adapted to the wants of their children."

We have thus cursorily run over the work before us, touching upon some of the topics which appeared to us as the most prominent. Of its merits, *as a translation*, we have said nothing. Upon the whole, Dr. Hunt has executed this part of his task very well. We could have wished, however, that some of the original text might have been somewhat more freely rendered into English. In every language there are idioms peculiar to itself, and inconsistent with the spirit of others. If an attempt be made to translate them literally, not only does the expression become unnatural and awkward, but the idea is ofttimes wholly lost.

The French indefinite pronoun *on* often troubles the translator. On the eighty-sixth page of the work under notice, we find the following:

> "Mason Cox places emetics in the front rank of remedies, in every stage of insanity. Rush believes emetics most useful in hypochondriacal melancholy. *They* repeat them many days in succession."

Here the pronoun *on* is rendered by *they*, which, as it stands, evidently refers to Drs. Cox and Rush. This was not the idea of the author; had it so been, he would have employed the pronoun *Ils*, thus definitely referring to the physicians mentioned. Had the passive verb been used in the translation, making the last sentence read, "They should be repeated many days in succession," the original would have been more accurately represented.

A similar instance occurs at p. 132.

> " *They* were in the habit of prescribing, for a time, the most energetic purgatives, drastics, and neutral salts."

In this case, the pronoun "*they*" cannot be understood otherwise than as referring to Boërhaave and Van Swieten, whose opinions had just been quoted. The signification of the original, as we understand it, would be expressed in the following terms:—"Physicians were in the habit of prescribing;" or, "Physicians formerly prescribed."

Upon the eightieth page, we read:

> "Did *they* wish success in the treatment of the insane, *they* would make choice of a small number of instruments."

Here, *they* has no antecedent whatever. The author, in this place, makes use of *on:* having reference to all persons concerned in the treatment of the insane. His sentiment would consequently be expressed by using the passive verb, "Were success wished."

On the 217th page, a parallel case occurs.

> "In the post-mortem examination of the insane, and consequently in those of melancholics, *they* have too frequently neglected to notice the diseases that caused death."

The last clause would be more perspicuous if the word "physicians" were substituted for "they," or if it read, "the diseases which caused death have too frequently been unnoticed."

> "It is remarkable in England, especially among the Catholics, who always ally themselves in marriage with those of their own denomination. The same may be said of the great lords of France, who are almost all *parents.*"—P. 49.

In the latter sentence, the meaning of the original is materially perverted. It should read "who are almost all *relatives,*" i. e., by intermarriage.

"Buffon has borrowed *at* Espion (turc) a very remarkable fact."—P. 51.

In English, we generally borrow *of* or *from* a person, or thing. In using the term "*l'Espion turc,*" *Anglicé*, "Turkish Spy," the author undoubtedly referred to a work entitled "Letters written by a Turkish Spy in Paris," a publication which, if we mistake not, appeared in the time of Cardinal Richelieu.

"A word of information this to such of my countrymen as think that the better must be always among *strangers*."—P. 62.

Had this sentence terminated with the word *foreigners*, the true import of the author's words would have been given. All *foreigners* may be strangers, but all *strangers* are not foreigners.

"Apoplexy is *still* one of the maladies which terminates the life of the insane."—P. 68.

The word "*encore*," as it stands in the original, signifies *also*, rather than *still*.

The use of the present tense in the narration of circumstances or events which are passed, gives vigor to language, and a graphic clearness of the idea or image intended to be expressed or portrayed. It is a method occasionally adopted by English authors, and very frequently by the French. But if, in the same sentence, both forms of the verb are used, the beauty of the language is marred, the idea confused, the image imperfect. There are some instances of this defect in the work.

"A girl six years age, *sees* her father massacred, and *has* since *been* subject to panic terrors. At fourteen her senses *were* imperfectly established, and she *becomes* a maniac." (P. 50.)

"On the thirty-first day, we *noticed* that he was pale. He *asks* to sit down, and expires. I *found* in the duplicature of the falciform fold in the dura mater," &c. (P. 68.)

"In 1810 she *becomes* more composed, and *falls* into a state of dementia, which *enabled* us to observe traces of her early prevailing ideas." (P. 219.)

In the first two of these extracts, the verbs are all in the present tense in the original, and in the last they are all in the past tense.

It is in no spirit of hyper-criticism that we have thus ventured to comment upon some passages in this translation. We are fully disposed to render to the translator "that measure of courtesy which may be fairly accorded to undertakings of this character;" but, while so doing, we cannot forget that justice is also due to the author.

Besides, it is a matter of no small importance, in our opinion, that medical literature be made pure, while we are endeavoring to render medical science perfect.

Had proper regard always been paid to this subject, a standard work on obstetrics, by an American author now deceased, would not have been laden, as it is, with grammatical errors.

Practically, these matters are of minor importance, and consequently, we have devoted as much space to the subject as is justifiable. The members of the profession in the United States are now furnished with the results of the "forty years" experience of Esquirol, and their thanks therefor are due to Dr. Hunt. Although he may not receive a pecuniary recompense adequate to the labor expended in the undertaking, yet ought he to experience a higher reward, that of a consciousness of having promoted the cause of humanity.

The author of the work is now no more. Full of years and laden with the honors of benevolent deeds, he has fallen into the "Sleep that knows no waking,"

> "Like one who wraps the drapery of his couch
> About him, and lies down to pleasant dreams."

But, "Being dead, he yet speaketh." His lessons of wisdom are with us, in a form that shall reach posterity in the distant future. Yet not by this means alone speaks he to the living. His life is before us, an eminent example of industry, assiduity, perseverance, patience, integrity, uprightness and active benevolence. Though he may sleep, as, if we mistake not, he does, beneath the Acacias and Arbores Vitæ of Père La Chaise, yet his spirit comes to those who are engaged in the enterprise that engrossed his time and energies during life, bidding them God-speed on their errand of usefulness, urging them to unwavering devotedness of purpose, fortifying them with strength to bear their burthens through "good report and through evil report," guiding them in the path of duty, and consoling them with the assurance of recompense if they walk therein unto the end.

P. E.

Art. XI.—*Lectures on the Theory and Practice of Surgery.* By Abraham Colles, M.D. Edited by Simon McCoy, Esq., F.R.C.S.I. 8vo. pp. 420. Barrington & Haswell, 1845.

The volume before us is evidently the work of a man of accurate observation and extended experience: not the closet production of a compiler, who has acquired his knowledge of disease only from the recorded observations of others. The name of Colles has been long and favorably known to the profession, as that of a distinguished anatomist and surgeon. For thirty-four years, he held the station of Professor of Surgery in the Royal College of Surgeons in Ireland, and enjoyed in an eminent degree the confidence of the community, and the esteem of his professional brethren.

Regarding the volume of lectures before us as the production of such a man, we confess that we have been somewhat disappointed in its perusal. For, although it contains a large amount of valuable practical matter, in treating of some important subjects, it is manifestly defective, and in some parts it presents palpable errors and inconsistencies. Much allowance, however, is to be made for the errors and defects of the work, from the consideration that it was not arranged for publication by the author himself, but was prepared for the press from notes taken by one of his former pupils.

Without any further preliminary remarks, we proceed to give some extracts from the work, illustrating its merits as well as its demerits. Speaking of the application of fomentations over inflamed parts, the author says:—

> "Various medicinal plants are boiled or macerated in the water of stupes, but I doubt that they are of any use; I am not, however, certain; if any of them do service, it is camomile, which, I think, I have seen somewhat useful."

It seems to us very strange, that so experienced a surgeon as Colles should have been ignorant of the beneficial effects which follow the application of tobacco, opium, stramonium, and other narcotic substances in certain conditions of inflamed parts. On the subject of local bleeding, the author remarks:—

> "To cup and scarify an inflamed part is just adding fuel to fire."

Could he have been ignorant of the benefits which are derived from scarification, in inflammation of the conjunctiva, of the tonsils and of the tongue, and in certain forms of erysipelas?

As an example of the inconsistencies which are to be found in the course of the work, we quote the following remarks on the subject of emetics:—

> "Emetics are seldom required in surgical diseases. I know of no surgical case where they are of much use except hernia humoralis.
>
> "If you have such a pulse in the beginning of erysipelas (full, hard and frequent) with irritability of stomach, give an emetic, and the pulse immediately becomes soft and regular. Give large doses of tartar emetic: you need not be deterred from causing full vomiting by the apprehension of a blood vessel being ruptured, &c.; and you will find it is the only thing to be relied on."

In his remarks on lacerated wounds, the author relates the following case, which is analogous to several others which are on record, and which illustrates the general immunity from hemorrhage in this class of wounds:—

> "I saw a boy whose arm got entangled with machinery, and was torn away from the trunk, and although the blood vessels and nerves hung in strings from the wound, he did not lose an ounce of blood, and he recovered in three weeks without having a bad symptom."

The following statement, in connection with punctured wounds, is worthy of attention:—

> "It has happened that a person getting a prick of a pin in his finger will have that finger waste away, and not only the finger, but sometimes the hand and arm up to the elbow. I believe this is owing to something wrong in the constitution, but I do not know what it comes from; warm applications, as warm water and electricity, often cure it, or check its progress."

On the subject of gun-shot wounds, we find the following judicious remarks:—

> "It will sometimes happen that a gun-shot wound continues to discharge more matter, and for a longer time than you could suppose necessary for such a wound. You may be sure in this case that the discharge is kept up by some foreign body

in it, and from this cause a fistula may form in the wound, and the discharge might even continue for two or three years, without the foreign body making its way out; now, what are we to do here? Why, just nothing, as regards the wound—all we can do is to look to the constitution of the patient, to see that it is not too much reduced, which sometimes appears to be the case, from the profuse discharge and the high irritation or suppurative fever; it is useless to go probing and poking such a wound, for neither your instrument nor finger can reach it, the track of the ball is not straight, and even if you were satisfied what the foreign body was, and where it lay, could you in many instances extract it? Should the opening close, matter may collect and form a considerable abscess; here the surgeon may render the greatest service by making an opening where this matter appears to point, or at least where the fluctuation is discernible, for it may be necessary to cut down very deep, and this to prevent the matter breaking through the old wound. In some cases where a foreign body lies long in a wound, and cannot be found or got at, there is one method you may practice with success, and, in fact, you have no other rational one to adopt—it is this, to plug up the external opening; by this means the matter is made to collect, this loosens the piece of cloth, or whatever else is there, and on letting out the well of matter, it will probably be floated out along with it; the best thing to plug it up is a little sponge dipped in a thick mucilage of gum arabic.

"Wherever a ball is lodged, it quickly becomes enclosed in a cup of coagulable lymph; this is very necessary for the surgeon to remember, for by forgetting this one fact, great difficulty is often experienced in operations for cutting out a ball, even by men who are quite well acquainted with the anatomy of the parts through which they cut. When you come down to the ball, you expose about one third of it, and then it may be turned round and round, but cannot be extracted, except the cup of lymph is fairly and fully divided."

In the treatment of aura epileptica arising from local injuries, the author speaks highly of the beneficial effects resulting from the application of a tourniquet:—

"A woman fell in James's street; she was a large, strong, masculine woman. In falling, her arm came to the ground, and she got a sprain; she was taken into Steven's Hospital, where a relative of hers was a nurse. One of the pupils saw her, but did not think much was the matter with her, and supposed she only feigned to be ill. I, however, saw her shortly after, and though there was nothing very serious in the appearance of the injury in her arm, I thought I saw something peculiar in her countenance, and desired her to be kept in till morning. Well, all that night, her shrieks kept every one in the ward awake. The pain went from the thumb up her arm, and as soon as it got to her shoulder, she shrieked violently. It sometimes went from the shoulder down the trunk, and into the thigh of the same side. Everything that could be thought of was done, but nothing was of the least service. Well, I recollected having read something about the tourniquet in such cases, and so I applied it to her arm, and immediately the next pain came, and advanced as usual, but when it came to the place which was encircled by the tourniquet, it could get no further. I then removed it, and placed it on the thigh, and when the pain came to that part, it was again stopped, and could not get beyond the instrument. I replaced it on the arm, and for several days there was no return of the pain. I then took it off entirely (it was a little cruel to be sure), but I removed it, however, and quickly all the symptoms returned with the first violence. It was finally replaced on the arm; she had no return of the pain, and was completely cured by this method alone. The tourniquet, of course, was not kept always tightened on the limb, for it could not live in that state; but she was instructed to tighten it when she felt the pain coming on."

Dr. Colles attaches great importance to the physiognomy as a means of diagnosis in tetanus. This is, undoubtedly, a subject, which has not received from the profession the attention which its importance deserves. And we have no doubt that if it were properly attended to, it would prevent many serious mistakes in diagnosis. Dr. C. observes :—

> "For my own part, I think the countenance would, in every case, be sufficient to distinguish it from all others. I never saw but one description of face, one tetanic expression of countenance ; it is the same in all cases ; it is the first thing that gives the alarm, and the last symptom to depart. Even where a patient recovers, and is able to go about his business, that tetanic face remains. I believe it never leaves him. There are other diseases in which there may be some resemblance to a paroxysm of tetanus, but none in which the muscles remain, as in this, as rigid as a board after the paroxysm."

In his chapter on ulcers, the author describes a sore which is remarkable for its irritability, and no description of which is found in the ordinary text-books :

> "It generally comes on the outer side of the ankle, upon or a little above the external malleolus ; it is a small ulcer, sometimes not larger than the point of the finger ; it never goes entirely through the skin ; it has no edges, nor is there any inflammation about it ; it discharges good matter, and has nothing very grave looking connected with it ; it is excessively painful, however, and you examine it all over in vain, to say why it is so. You really can see nothing to account for it, in its appearance at least. Now if you have soft, mild applications, such as poultices, laid on it, you will set your patient mad with the pain. Rub over its surface with a pipe of lunar caustic, and dress it with a solution of the same, under which the pain will cease, and the ulcer heal."

In the treatment of varicose ulcers, Dr. C. attempts to effect a radical cure by means of an instrument of his own contrivance, which he calls a vein-truss, and which he thus describes :—

> "It consists of a spring, something like that of a truss for hernia, but shaped so as nearly to encircle the upper part of the thigh ; it is furnished with a pad made to press on the saphena vein, just where it is about to enter the femoral vein. This instrument must be put on before the patient gets up in the morning, while in the horizontal position ; for if he gets up before it is applied, he will certainly be uncomfortable all the day afterwards. I have tried the efficacy of the instrument with decided advantage."

The author then goes on to relate several cases which seem to demonstrate the utility of the instrument.

In speaking of the subject of mammary abscesses, Dr. C. objects to opening these collections of matter, until they are on the point of opening spontaneously. We are satisfied that his instructions on this point are erroneous, and that, by the timely use of the lancet, much pain and constitutional irritation may be prevented.

We are surprised to find that Dr. C. objects to the operation of trephining in cases of extravasation of blood within the cranium, following an injury. His objections appear to us to be contrary to reason and experience ; and we are convinced that they will not be sustained by the verdict of the profession. That we may not do our author injustice, we will quote his own words :—

> "Now if the blood be between the dura mater and the bone, what harm can it do there ? Although the patient may remain for two or even three days insen-

> sible, the blood does not continue to be poured out all that time, for the closeness of the adhesion of the dura mater to the bone limits the quantity of the extravasation, and also the great strength and unyielding nature of the membrane itself; so that the thickness of the coagulum is not greater than the thickness of a shilling, and sometimes not half so much, about an inch or an inch and a half in diameter; and of the hundreds of cases we see recover from such accidents without any operation, it is hardly possible but that some of them must have had such extravasation; in fact, we are not without evidence that even large coagula, comparatively, have lain for a considerable period within the skull, and in much more critical situations, without producing any serious effects, after the first that followed the rupture. The blow on the instant separates the dura mater from the skull, and a little blood is thrown out from the wounded vessels; we trephine the patient, and are, perhaps, congratulating ourselves on the improvement we have effected, for he appears more sensible, perhaps opens his eyes and speaks, but the next day we find him worse."

It is very evident that Doctor C. has here given a very imperfect idea of the quantity of blood which is liable to be extravasated, of the mischief which is occasioned by its pressure upon the brain, and of the benefit which is derived from its removal. There are, perhaps, no other cases of injury of the encephalon, in which such decided advantages result from trephining, as in cases of extravasation of blood between the cranium and dura mater.

The following quotation is interesting as illustrating the dangers of trephining, where there was no other source of danger but in the operation itself:—

> "Dr. Evatt had taken it into his head that lunacy was owing to the brain becoming too large for the cranium to hold it, and, full of this notion, he succeeded in getting permission to try if he could cure it by trephining. Accordingly, three lunatics, in sound bodily health, were subjected to the operation; and what was the consequence? Why, that two out of the three died from the experiment."

The prognosis which Dr. C. expresses in hernia cerebri is altogether too unfavorable: he even denies that recovery ever takes place. The reported cases of recovery he regards as nothing more than instances of fungus of the dura mater. His statements on this subject are certainly contrary to the experience of other surgeons.

In speaking of tracheotomy for the relief of symptoms occasioned by the presence of foreign bodies in the trachea, the author gives the following very interesting result of his experience. which coincides with the result of the operation which Sir Benjamin Brodie performed on Mr. Brunel, and which is probably familiar to most of our readers.

> "If the operation is required in consequence of a foreign body being in the trachea, it generally happens that the moment this tube is opened, the substance that got into it is thrown into the mouth: I don't know how this happens, but so it is."

Doctor C. regards the extirpation of the parotid gland as altogether impracticable, and considers the alleged cases of its removal to have been cases in which enlarged lymphatic glands were mistaken for the parotid. Speaking of nasal polypus, he makes the following remarks:—

> "Now the malignant polypus of the nose is accompanied from the commencement with pain in the nose and forehead, and general headache. It is not affected

by change of weather or other circumstances that influence the mild form of the disease—it is not soft or greyish, but has a peculiarly firm consistence and a liver color; when you press on it pain is felt, and some blood will be discharged. This polypus may go on slowly, increasing for years, until it ends in a cancerous or fungous disease, and produces a frightful destruction of all the neighboring parts. Long before this, however, the skin over it assumes the liver color of the polypus itself; in some of these cases there will be small bleeding from the nose, from the beginning, and the bleeding will be increased by touching it. Treat this malignant form as you will, it will never become mild—it will not change its character for that of the simple kind I first mentioned, and so far is any interference or meddling with it likely to do service, that it only hurries it on to its worst form. I saw one case in which the patient died in twenty-four hours after an attempt had been made to extract a malignant polypus. Notwithstanding the opinion of John Bell and Richter, I am decidedly of opinion that they should not be meddled with."

The following remark occurs in the lecture on injuries of the abdomen:—

"A man gets a contusion in the abdomen from a fall, and a pretty large tumor forms, how are you to know whether this is caused by blood or fæces? A collection of fæces, in such a case, never forms a large tumor, it must therefore be blood. This patient may recover; but all you can do for him is to bleed, bleed, bleed."

It appears to us that the author's therapeutical directions in this case are very meager, as he overlooks the benefits which result from iced drinks as auxiliary means of restraining hemorrhage, and from calomel and opium in subduing the inflammation which follows. Doctor C. appears, in the following remark, to attach undue importance to the agency of the peritoneum in preventing hernial protrusions:—

"Protrusions of the viscera of the abdomen in the form of hernia will always take place after the healing of the wound, in the parietes, wherever the peritoneum is deficient, even though the rest of the parietes be perfect; as I before mentioned, the muscles will never resist the protrusion."

In wounds of the intestines, the author recommends that the edges of the wound should be brought together, and maintained in contact by means of the continued suture, the ends of the thread cut close, and the bowel returned into the abdomen. He states that the thread is invariably discharged through the intestinal canal. The following case of recovery after a gunshot wound of the bladder is one of much interest:—

"I saw a man who received a ball that went exactly through the sciatic notch, and penetrated the cavity of the bladder; it did not go through, but lodged in the bladder. After some time the patient found he could not make water, but after a deal of effort, a piece, or rather two pieces, of cloth, which were rolled up into a ball and had lodged in his urethra, were shot out, and he then made water freely enough; but the ball still remained in his bladder, and the only inconvenience he felt was, that he could only make water while lying on his side. He could not make a drop in the erect position, and he afterwards submitted to the operation of having it cut out. Here is the ball, and although it remained twelve months in his bladder, you perceive there is not the slightest appearance of incrustation on its surface. In gunshot wounds of the bladder, urine is never effused."

In treating of the subject of hernia, the lecturer cautions his hearers against confounding inflammation of the testicle, within the inguinal canal, with strangulated hernia. The symptoms are very similar, and the diagnosis difficult. If an operation be performed on the supposition that the disease is hernia, and the testicle be exposed in this situation, fatal peritonitis will generally follow, as in a case in which the author operated. In wounds of the brachial artery in venesection, Doctor C. expresses his opinion that bandages are of no use, but on the contrary are positively injurious. Here we think that he is in error, as there are a number of instances on record, in which a bandage and compresses, methodically applied, have been successful in arresting the effusion of blood, and preventing the formation of aneurism, and have thus saved the patient the disagreeable necessity of submitting to the ligature of the brachial artery.

The following graphic description of the difficulties which are encountered in the attempt to secure a wounded artery, no doubt agrees with the experience of every practical surgeon:—

> "We may talk as we please about our fine operations, but I protest I do not think in all surgery there is an operation half so difficult as taking up a wounded artery. You look and you see the blood coming, and you think you are just at the wounded part of the vessel; but perhaps the artery is wounded an inch, or an inch and a half, or two inches, from where you see the blood issuing, and the difficulty is increased if the operation is delayed for eight or ten days; you think you are well acquainted with the relative situation of the parts, and on cutting down you are surprised not to find the artery. Although you have two inches of it exposed, you can neither see nor feel it pulsate: one of your assistants will cry out that he has it, but no one can feel it but himself, and it turns out that it was the pulsation of the artery in his own finger, which he mistook for that of the artery you were looking for. Another thinks he sees the pulsation, but no one else can. You have no conception of the difficulties of the case. If you make up your mind that you will not find the artery as superficial as you might, from mere anatomical recollections, expect, you will get rid of one of the causes of embarrassment. Take your time, and you get rid of another.
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> "It seems very plausible to say, in looking for a wounded artery, follow the track of the wound in the part, and you must at length come to the vessel, but it is very difficult even to trace the course of the wound; the cellular snbstance is everywhere stuffed with blood—nerves, arteries, tendons and muscles are of the same color; they are all out of their position; you lose your way among them, and the only way to find it again is by dividing fresh parts: even when you are directly upon the wound of the vessel, you will not recognize it, for the contact of the air will prevent its bleeding in many instances. Well, despairing to find what you seek, you give up the search and dress the wound, in the hope that as no blood is coming, the artery may not, after all, be wounded—or at least that the hemorrhage will not return. You are scarce at home before a message is sent in great haste to let you know that the man is bleeding to death; you return, and find no bleeding from the wound; it has stopped again. You remove all the dressings, you see a small stream of blood coming, and you try to put a ligature around the part from which it issues, but you find you are only trying to tie a piece of coagulation in the sheath of the artery. In fact, you must get a full view of the wounded artery, and to do this, you must introduce your finger into the wound, tear out all the coagulated blood, and, if necessary, use the knife also. You sponge it all away, although it gives great pain to the patient; you now look for the artery, you may miss it three or four times, but persevere until you find the orifice, and when you do, and have dissected the parts clean about it, put on two ligatures, one above and the other below."

In the lecture on aneurism, the author alludes to the difficulty of diagnosis which sometimes exists, not only when pulsating tumors are situated in the great cavities of the body, but even when they are in the limbs.

> "I remember at one time most of the first-rate surgeons of this city met in consultation at the Lock Hospital, on a tumor above the clavicle ; they all with one exception (old Mr. Hugh) declared it to be an aneurism. He, however, dissented, and I took the man into Stevens's Hospital to see the issue of it, and sure enough it turned out to be an abscess. I saw a case once which deceived a great many—it was a pulsating tumor in the groin, and as the proposal to take up the iliac artery was not then advanced, they did not know what to do with the case. It was therefore left to take its own course, although no one doubted its being an aneurism, and afterwards it turned out to be an irregular growth of the acetabulum from disease of the hip-joint, and the swelling had thrown the femoral artery prominent in the groin."

Doctor C.'s remarks on erectile tumors are very meager, especially in reference to their treatment. He speaks of excision as the only remedy to be relied on, and is entirely silent as to the use of the actual and potential cautery, the seton, strangulation by ligature, and other approved methods of treatment.

On the subject of the removal of cancerous breasts, the author makes the following remarks :—

> "For my own part, it is an operation I would not press on a patient or her friends at all. It is one by which very little service is rendered at any time. After submitting to it, the patient will get a relapse, and generally sinks within two years. The longest time I ever knew a patient to live after the extirpation of a cancerous breast was four years."

We admit that the prognosis is exceedingly unfavorable in this disease, but we think that the view which the author has presented is somewhat too gloomy. We have in our mind the case of a lady from whom a cancerous breast was removed five years ago, by our friend Doctor Buck, and who is yet living in the enjoyment of good health. We are surprised to meet with the following remark :—

> "In cutaneous cancer, wherever situated, the knife should never be employed. Here caustics often effect a cure."

Here we beg leave to express our dissent from the prohibition of the knife in these cases. We are fully satisfied that, in many cases of cancer of the lip, eye-lids, and other parts, the treatment by excision is much to be preferred to that by caustic, as being more certain and less painful, and being followed by less deformity. On the subject of strictures of the urethra, we find the following observation :—

> "Stricture is really a very uncommon disease, but the number supposed to have them is very great."

We do not know how it may be in the latitude of Dublin, but we are persuaded that strictures are very far from being uncommon in New York. In the treatment of retention of urine from stricture, where a catheter cannot be introduced, Dr. C. advises to proceed to the operation of puncturing the bladder. He says nothing about venesection, warm baths, opium, tobacco, tartarized antimony, tincture of the muriate of iron, and other remedies, by which the necessity for the operation may be obviated. We think that his directions on this subject are calculated to mislead those who follow them, as we are satisfied, from our experience in these cases, that the great majority of them may be relieved by the judicious employment of the remedies to which we have alluded. In connection with the subject of rupture of the urethra, we find the following remarkable case :

> "I was sent for to visit a gentleman who was but eight or nine days married; I found him in great pain—he wanted to have connection with his wife, but somehow struck his penis with force against the woman's pubis, and a rupture of the urethra was the consequence; we could not pass an instrument into the bladder, notwithstanding the most patient and persevering trials. The patient's agony and excitement increased, and he got a fever, like the yellow fever of the West Indies, which carried him off."

In amputating the penis for cancer, Dr. C. recommends that the integument be drawn forward as far as possible before the incision is made, as there is apt to be superfluity of skin after the operation. In connection with the subject of stone in the bladder, the author directs the attention of his readers to a condition of the bladder, which he had met with in two cases :—

> "The inferior fundus or floor of the bladder was coated with a thin layer of calculous concretions; now, this would give, of course, the exact feel that a loose calculus of the bladder would give ; but I need not tell you that an operation could give these men no relief whatever. Both the patients to whom I alluded got quite well of their complaints—contrary, I must say, to my expectations."

In illustration of the fact that a stone in the bladder may exist a long time without giving rise to urgent symptoms, the author relates the following interesting case :—

> "I knew a child who had stone, yet he used to go to school, and play, and be as busy and active as any of the boys, and he grew up like the rest of the children, yet this child was for so many years unconscious of the presence of the stone, except now and then, when he would have, what his mother called, a fit of his complaint; it is such cases as this, that have from time to time given a celebrity to quack medicines for dissolving stone in the bladder.
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> "If a stone was to become sacculated, the urgent symptoms of the complaint would cease immediately, and if the individual in whom this occurred was taking any of those favorite lithontriptics, we might talk until doomsday of the folly of trusting to them, but no one would believe us, unless the stone slipped out of its sac, and renewed the painful evidence of its not being dissolved."

We have given these extracts because we think that there is at the present time too much disposition to rely on the class of remedies which has been alluded to, and because we are convinced that there is no remedy yet known to the profession, on which reliance is to be placed, excepting the mechanical removal of the stone from the bladder. Dr. C., in speaking of the treatment of caries of the spine, gives the following caution with regard to the use of issues, a caution which we commend to the serious attention of our readers :

> "The impression on your mind, from what you have read of the matter, would be, that to apply issues and keep them open, would be a very easy matter, and free from all danger—but the reverse is often the case. In bad constitutions, I have known two patients die from the cut made for an issue ; but the scratch of

a pin would have caused the death of these persons by exciting diffuse inflammation, as the cut of a lancet did. I saw a child who was under the care of a surgeon for a diseased joint;—after having an issue for some time, the little patient complained of pain in the issue; the surgeon took no notice of it. It became more severe. A black spot formed on a little fungus which was on the surface of the issue. Two or three others afterwards formed—mortification took place, and the child died. When the issue becomes irritable and gives pain, never disregard those symptoms—just take out the peas, apply a poultice (a carrot one, if you like, or bread and milk), and when these symptoms go off, you can resume the issue. I have a patient who has had an issue in these twelve months, and during that period I have been obliged to act thus three or four times. Sometimes the issue will become very painful, but it may be owing to a little fungus rising out of it—if this is the case, pressure or a mild escharotic is the best thing you can employ; sometimes the issue will become very painful, and on inspection you can see nothing about it that could cause the pain; yet if there continues much pain, and pressure or caustic does not relieve it, it will operate on the constitution at last, and whether it has been put in for curved spine, or a diseased joint, take out the issue, or the patient runs down rapidly in hectic fevers;—the morbid irritability is the important thing you have to watch."

Having made a cursory review of the work before us, and presented to our readers a few extracts illustrating some of its most important doctrines, we must now bring our remarks to a close. It will be seen, from the opinions which we have expressed, that we do not regard the work as worthy of unqualified praise or censure. With some errors and imperfections, it contains many sound and practical views, illustrated by cases drawn from the author's rich experience, and may be advantageously consulted by those members of the profession who desire to extend their acquaintance with the subjects of which it treats.

A. C. P.

Art. XII.—*A Treatise on Diseases of the Sexual Organs; adapted to Popular and Professional Reading, and the Exposition of Quackery, Professional and otherwise.* By Edward H. Dixon, M.D., New York, Burgess, Stringer & Co., 1845. 12mo., pp. 260, with Plates.

Though not very partial to medical works designed for popular reading, yet as most men will, under particular circumstances, aspire to be their own doctors, it perhaps is as well that works should be prepared for their special benefit. Were well qualified physicians always accessible, and did not shame, pride, and other feelings, deter mankind from exposing their complaints and weaknesses to others, there would be little excuse for scientific catering for the public at large; and medical terms might, for every practical purpose, be still wrapt up in a dead language. With these views we have no particular fault to find with the publication of such works as this.

The author in his Preface expresses the opinion that "the most effective causes are operating, to break down the slender barrier hitherto existing, between the accomplished surgeon and the vilest empiric,"—and he attributes this, very unjustly in our opinion, to the power vested in our medical colleges to grant diplomas. Now, if the learned author will gather up the statistics of the profession, he will find that a majority, probably, of the practitioners in our State, and certainly a majority in Pennsylvania, are *licentiates*, and not graduates from our medical schools; and moreover, if he extend his observation a little further, he will find that our best educated, most accomplished, and most successful practitioners, are Doctors in Medicine, or M.D.'s. The younger class of physicians, who have had the advantage of attending medical lectures, witnessing and performing dissections, seeing hospital and clinical practice, &c., it is generally acknowledged are far in advance of the older class, who enjoyed none of these advantages. In those States, as Connecticut, where the examiners for the degree of M.D. are appointed by the State Medical Society, it is universally admitted, that the examinations are even less strict than when conducted by the professors themselves, and that the requirements for graduation are no greater than in the schools of this State. To examine well, for example, in Latin, a teacher of Anatomy is required; and so of Chemistry, Botany, and every other branch. We have elsewhere admitted that it would be well to have others associated with the faculty, in the capacity of judges; as at Geneva College, where delegates or censors, from the State Medical Society, are always present, and have an equal vote with the professors. Dr. Dixon expresses the opinion, that the sole authority of conferring diplomas should be vested by law in the State Medical Society; but surely he cannot be ignorant that the Legislature has no power to take away the vested rights of incorporated colleges, of which the power of granting degrees is one of the most important. It may extend this power,—it may grant it to the State Society, in common with the colleges; but it cannot wholly take it away from the latter.

After giving a rather remarkable history of Syphilis, so far as allusions to holy writ are concerned, the author enters upon a description of *chancre*. He recommends in all cases, excision with the scissors; raising it up by means of a small forceps, so as to grasp its base, and then removing it by a single clip of the curved scissors. Dr. D. states that he has often succeeded after the 5th day, and even after a bubo has formed, which has rapidly disappeared upon the removal of the source of irritation. Where, however, the chancre is extensive, the application of caustic is necessary.

> "Mercury is not to be thought of, so long as there is a possibility of stopping the disease at once. Chancres occasionally present the appearance of a raised vesicular character, and are filled with thin serous fluid. These are often too extensive to be cut out. They should be ruptured and instantly well washed with a large quantity of water, so as to prevent the contents from affecting any other portion of the penis. They must then be well cauterized with the nitrate of silver, till they are quite white, and dressed with dry lint only. Examine them on the second day, and if the surface is not thoroughly altered, apply the caustic again. When the sore presents a healthy granulated appearance, dress it with dry lint till healed. No greasy applications whatever are admissible, whether mercurial or otherwise."

Dr. D. describes three other appearances that chancres assume, which are so frequently met with, as to possess much interest in the eyes of the practitioner.

> "*The phagedenic, or sloughing ulcer*, though it originates in a manner either similar, or nearly so, to the preceding, in a day or two assumes an alarming appearance. It derives its name from φαγω to eat. It eats away the skin, and

should it happen to exist on the smooth surface, or glans of the penis, it may in a few days burrow so deeply as to attack the deep and vascular structure, when the most alarming flow of blood may be the consequence. It has been often noticed (and here is an irresistible proof that there are essential differences in the original poison), that several individuals will be affected with this ulcer from the same woman. The ulcer is characterized by great irregularity of shape and depth, being ragged in its circumference, often very painful, and covered with a greyish and thin coating over its surface; its discharge is bloody, from the numerous small vessels it so rapidly destroys, but its natural ulcerous secretion is thin and unhealthful, being the reverse of pus or matter, which is bland and cream-like. Both local and general treatment are necessary. The best surgeons frequently attempt to alter the action, as in common chancre, by caustic, the nitric acid, &c. As constitutional treatment is invariably necessary, and it would evidently conduce to the worst results to tamper with so alarming a case, I shall only suggest to the patient to avail himself of the best surgical aid within reach, and to avoid all domestic or friendly prescriptions, as he values his penis.

"The next variety of chancre, and the one we most frequently meet with after the first described (the phagedenic fortunately being more rare), is called the *irritable aphthous chancre* .It is so named from its resemblance to the small ulcers of a whitish color that often form in the mouth. Every person has had these annoying companions at one time or other, about the lips and on the side of the tongue, where they originate sometimes from cold, and oftener from derangement of the stomach, and are called aphthæ by physicians. Though perfectly simple in character, often disappearing without any treatment, they so closely resemble the chancre above mentioned as to give it a very appropriate name. This resemblance, doubtless, depends upon their situation, and the precisely similar nature of the skin covering the glans or head of the penis, to the mucous membrane of the mouth; both the aphthæ and the chancres being directly under the delicate cuticle, or as it is called, the scarf skin.

"This chancre is accompanied with itching, and is often of so slow a progress that it does not excite the alarm of the patient, till some slight exposure or constitutional derangement lights up an action,—the poison is absorbed, and bubo is produced. I have known them, no larger than a pin-head, remaining an entire month in a torpid state, and then, even without a bubo, causing a profuse constitutional eruption, and the greatest distress and mortification to the patient, who, imagining himself quite secure, and not dreaming of the least harm from the insignificant ulcer, had unwisely neglected to seek advice. These chancres admit of the same treatment as those first described. Like them, they can be cut short in the beginning, if decisive measures be taken; and like them, be followed by the same constitutional symptoms if neglected.

"Like all other chancres, the later the patient applies for advice, the more likely he is, either to be subjected to the mercurial course, or to have the constitutional eruption. Nor can the surgeon, as I know by experience, even should the patient apply as early as the tenth day, assure him, in all cases, that he will not be overtaken by general eruption, as I have had this happen directly to myself, as well as under my notice in the practice of a friend distinguished for his skill in the treatment of syphilis; neither my own nor my friend's patient having ever before had the disease, both having been under the same care for many years, for which reason we were perfectly willing to believe them. Neither of our patients had bubos.

"It would seem from the description of Mr. Howard, a distinguished British writer, that there is a variety of this chancre which he terms, "the *livid* irritable chancre.' He describes it as follows: 'From the beginning, painful to the touch, instead of the aphthous, it has a livid or blackish hue, with a corroded surface, and hollow ragged edges. It creeps on at a great rate, eating away and undermining the surrounding skin irregularly, like a small spreading phagedenic sore. It is attended from the beginning with much more discharge than the preceding species, and that discharge seems to be highly acrimonious. Bubo comes on much sooner in this than the preceding species of chancre.' Mr. Howard describes several species of this ulcer, all of which we have taken the liberty to append as varieties to the aphthous chancre, believing them to depend exclusively upon the different constitutions of those affected. Our object in the present work, indeed, is to simplify to the non-medical observer, as far as possible, a subject involved by writers in great perplexity, and to enable the afflicted to form a rational judgment on the nature of his affection.

"The fourth and last variety of chancre, is one that has been the cause of more disappointment, both to the patient and practitioner, than any of the others. By its want of resemblance to either of the other varieties, and its complete similitude to an occasional effect of gonorrhœa, it produces either a false security, or a temporizing treatment, till the appearance of a bubo settles the question, and the patient is necessarily submitted to a mercurial course. It is called the *chancrous* excoriation of the glans penis. It consists of an infinite number of small chancres or papilla, that approximate so closely as to form the appearance of a removal of the skin, or raw surface, which soon degenerates into an extensive ulcer, which looks as though the surface was covered with starch or paste. There are, however, varieties of this excoriation from other causes; as, for instance, where due attention to cleanliness has not been paid, and the ordinary white discharge, where the foreskin covers the glans, has been suffered to remain and become corrupt. These affections will be noticed in the chapter on gonorrhœa. The same treatment is here applicable as to other chancres. The affection is far from infrequent, and I am satisfied that patients have often been saved from a prolonged mercurial course, by the proper application being made to them, with sufficient decision, to destroy their specific action.

"These are the ordinary forms in which primary syphilis presents itself to the surgeon. There certainly is very considerable difference in their occasional appearance; yet, as they all produce constitutional eruptions, and other symptoms of greater or less severity, and we sincerely think are capable of rapid cure in their incipiency, they are sufficiently described to give the reader a general idea of the kind of affection, for which he should seek medical aid. Yet, when we reflect that the act of coition, under ordinary circumstances, was certainly not intended by nature to be followed by any local injury, we cannot conscientiously abstain from urging the advice upon all who may have incurred the slightest injury to these organs, to seek the aid of an honorable and intelligent surgeon. The hints we shall give in this volume, will aid in distinguishing the empiric, and avoiding his practices.

"As chancrous discharges act with peculiar virulence and rapidity upon recent wounds, or even the slightest abrasions or cracks of the skin, about the fingers and nails, it is necessary to observe extreme caution. The writer has seen two severe cases of the disease from its action on the fingers of physicians, who had attended females in parturition, when afflicted with chancres. It is also frequently conveyed by the fingers to the eyes of patients, and destroys that organ with fearful rapidity. Neither patient nor physician should ever attempt the least manipulation in this disease, without previously providing a bason of water, and forceps, with which all dressing should be done, and never with the fingers."

The author next gives a very graphic account of *bubo*, which he defines to be, a painful swelling of a lymphatic gland, produced by absorption of the venereal virus. With respect to its treatment, we have the following observations:—

"There are, in several authors of the most distinguished character, opinions advanced that constitutional symptoms will not occur, where the syphilitic bubo disappears without suppurating, from which the most successful practitioners of our country entirely dissent. For myself I am happy in coinciding with them to say, that I do not know a single medical man who has the least doubt upon the propriety of a moderate use of mercurials, in all cases where it is not perfectly clear that the bubo is not syphilitic. And here it must be remembered that the chancre may occur entirely within the urethra, and so closely simulate gonorrhœa, with which indeed it may be combined, as to deceive both the patient and physician. Nay, sympathetic bubo will appear in clap itself. I can only say that the patient should rely exclusively, in such cases, upon the astuteness of his surgeon, and I need not urge the latter to give him, as they say in the law, the benefit of a doubt, and incline to prudence. I have nothing to say with regard to the choice of treatment. Rest, leeches, mercurial frictions on the thigh, blisters over the bubo, nitrate of silver freely applied, moderate pressure, make up the sum of efficient means. And I confess myself an advocate for an early opening, as soon as matter has formed, believing, from my own observation and that of numerous friends, that its absorption is very rare, and that its presence can only produce injury and annoyance to the patient.

"Poultices are often applied in the early stage of bubos. This is wrong. We should endeavor by all possible means to prevent their opening; but if it is evident they *will* advance to suppuration, the practitioner who is not confident of his ability to detect matter in its early stage of formation (and that is sometimes difficult, as there is a dense fascia or sheath of membranous structure over these glans), should apply a poultice till the matter is sufficiently distinct. Warm water, applied by a sponge, is the preferable and more cleanly method; but this is often impossible, as the patient refuses confinement to the house. The practice of opening bubos with caustic is very painful, and I believe now nearly obsolete. The lancet is the method most in use. As soon as the bubo ceases discharging, a solution of nitrate of silver, five grains to the ounce, will be of service in promoting healthful granulations. It may be increased to ten, and even twenty, and if the edges of the sore are hard and indolent, the pure stick may be applied. Yet all this rests with the judgment of the practitioner."

In relation to the management of Syphilitic Sore Throat, Dr. D. gives the following advice :—

"There are on the tonsils, or as they are often called, the almonds of the throat, as far back as one can see, many natural irregularities—these must not be mistaken for ulcers. Should the patient have been for some time under the use of mercury, and either have taken it in excessive quantity, or, as is also often the case, been predisposed to scrofulous affections of the throat, other difficulties will arise, which are to be left, of course, entirely to the skill of the practitioner. In such cases, besides the ordinary rule of the preceding history of the case, whether mercury has been taken, &c., as well as the general appearance of the patient, the physician, by a careful attention to regimen, and having the entire control of every circumstance likely to injure him, will run no risk, even if ulceration of a doubtful character should exist, by waiting a short time, and observing the progress of the disease.

"During this interval, he will probably test the action of caustic, a remedy of the utmost value, and one which will control more unmanageable ulcerations, under even the most opposite condition of circumstances, than any other, nay, we believe, than all others put together. It is here that the most entire trust in the surgeon is necessary, and unhappy indeed is both patient and surgeon if this be not reciprocal. The surgeon, if his heart is right, will not fail, should he deem it necessary, to suggest the aid of friendly counsel; and when this is done to their mutual satisfaction, he should proceed confidently in the treatment agreed upon, and carry it out to the utmost of his abilities. Then, even if the result be unhappy, that man is recreant to every principle of honor and manly fortitude, who visits his misfortunes (originating in the gratification of his own appetite) upon the reputation of his faithful surgeon."

Chapter V. treats of "Ulcers in the nose and mouth," in which, however, we discover nothing very novel; for Syphilitic eruptions and ulcers, a combination of tonics and mercurials is recommended, and especially the hydryodate of potash. In other words the treatment must be constitutional; local remedies having little or no efficacy. For nodes and swellings, mercury, internal and external, is recommended, and where matter collects under the investing membrane of bones, it should be discharged by puncturing with a lancet. For alopecia, or loss of hair, the yellow wash is highly spoken of, and should this fail, a sea-voyage is recommended.

In Chapter XII. the author discusses the question, whether there are any proofs that the disease is eradicated from the system—which is answered in the negative.

Dr. D. enters fairly upon the treatment of Syphilis in Chapter XIV. His views do not, however, appear to differ essentially from those of our standard writers on this subject. The following extracts are in point:—

> "Mercury, in some of its forms, is the only medicine on which reliance may be placed, and the averment of all who promise to cure by any other means, may, in the present state of practice, be taken as evidence of quackery. We now allude to all cases in which it has not previously been given, either by the quack or regular surgeon; for we are well aware of the existence of disease, itself caused by the injudicious use of mercury, and that too in syphilis. In these cases, tonic medicines, of which the hydriodate of potass and the iodide of iron may be said to rank highest, are indispensable; and whether mercury be resumed at a more auspicious period, when the tonics have rendered the system able to bear it, must depend entirely upon the good sense of the practitioner.
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> "In a word, we fully coincide with the sentiments of a large portion of the most intelligent surgeons, that mercury, in uncomplicated cases of syphilis, is a specific;—nay more, that it operates by actually neutralizing the poison, directly upon coming in contact therewith. Here we have the high authority of Mr. Bell, who entertains this view. And we really think the evidence would long since have been deemed conclusive, could the learned cobwebs, by any possibility, have been swept away from the brains of some of our most wordy authors."

In cases of stubborn local ulcers, Dr. D. recommends the application of mercurial vapor, in the following manner:—

> "The means used by the author of thus applying it, consists of a small tight tin closet about a foot square, containing room for a chafing dish of coals, on which a few grains of the red sulphuret of quicksilver is sprinkled; the fumes are directed to the sore by means of a flexible tube, its sides being held apart by a spiral wire; the mouth of this encircles the sore, resting upon the surrounding skin. We never apply this method to the body generally, unless the eruption is uncommonly obstinate and extensive; it should be used sparingly always, as it is impossible to estimate its effect, when used in conjunction with the internal administration of mercury.
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> "We have mentioned this method first, not because it is the most, but the least important. The two methods most in use, are inunction, or rubbing mercurial ointment through the skin, and the administration by the mouth.
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> "Inunction has the great advantage of producing the least disturbance. As it does not go into the stomach and bowels, it can produce no disturbance of them, unless very long continued, or used in too great quantity, when it may affect them secondarily. This is the oldest method of cure."

In the treatment of venereal ulcers in females, Dr. D. recommends the use of the speculum; an instrument, by the way, the use of which has just been prohibited by the governors of the Hôtel Dieu, in Paris, in that establishment.

With respect to the duration of a mercurial course, Dr. D. thus speaks:—

> "From four to six weeks will usually effect the disappearance of most constitutional symptoms in the first cases; but where a patient has been often affected, and more especially if he should have disease of the bones, there can be no rule whatever, as to the time it will take to remove the symptoms: he should present himself occasionally during some weeks after his treatment is discontinued, and his physician will then be able to anticipate evil, if any should threaten."

The remainder of the volume is taken up with a consideration of the subject of gonorrhœa, gleet, strictures, and fistula of the urethra, phimosis, sarcocele, hydrocele, cancerous diseases of the testicle, varicocele, cancer of the penis and scrotum, prolapsus of the vagina and womb, leucorrhœa, spermatorrhœa, venereal excess, onanism, &c.

We have thus given a very imperfect view of the contents of Dr. Dixon's work; but as full as our space will allow. It is written in a clear, nervous style, and is calculated, as we think, to do good. The descriptions are accurately drawn, and the remedial measures recommended judicious. The practitioner will find it abounding in valuable hints, and those who purchase it as a *vademecum*, or guide to self-medication, will come across many useful cautions, and premonitory warnings.

Art. XIII.—*Rheumatism, Acute and Chronic—A Prize Essay.* By G. C. Monell, M.D., of Newburgh, N. Y. H. G. Langley, New York: 8vo., pp. 144.

At the annual meeting of the Orange County Medical Society, May, 1843, it was resolved to offer a prize annually for the best essay on some medical subject. The first topic proposed was *acute and chronic rheumatism*, and the prize was awarded to the essay above mentioned. We hope that the laudable example thus set by one of our county associations will be adopted by all; for the emulation thus excited must unavoidably tend to advance the interests of medical science, and of the medical profession throughout the State.

The treatise of Dr. Monell is a very complete *resumé* of what has been written on the subject of this common disease. In connection with the pathology of rheumatism, he dwells particularly upon tenderness of the spine, indicating irritation at the origin of the nerve or nerves, supplying the inflamed parts. This condition, he supposes to exist *primarily* in most instances of the complaint, from whence it extends to those parts supplied by the nerves, whose origin is the seat of irritation. Dr. M., however, admits that in nervous subjects especially, and more particularly in females, this spinal irritation may itself be secondary, and caused by disorder in some other part of the system. He also states that when any part is affected with acute rheumatism, pressure on the spine at the origin of the nerve or nerves, which are distributed to the diseased part, will increase the pain in that part. This is a true remark, but it will apply equally well in all other inflammatory affections. We have seen this manifested so frequently, that not the slightest doubt remains in our mind as to the reality of the fact, and we believe this method of diagnosis might be employed with advantage far oftener than it is, in detecting latent and insidious disease of the different organs. If there is preternatural sensibility of the stomach, or organic disease of this organ, firm pressure between the second, third, and fourth dorsal spaces, will produce pain, and in hepatic affections of a similar kind, the same effect will be produced by pressing on the right side, between the seventh and eighth, and eighth and ninth dorsal spaces, opposite the lower part of the right shoulder blade. In disease of the spleen, pain is excited by pressure on the left side, between the seventh and eighth, and eighth and ninth dorsal spaces; if the right kidney is affected, increased sensibility will be created by pressure on the right side of the space between the twelfth or last dorsal, and first lumbar vertebræ, and of the left on the left side. Where the uterus is the seat of phlogosis, or neuralgia, the patient experiences pain when pressure is made between the second and third, and third and fourth lumbar spaces, &c. Dr. H. H. Sherwood, of this city, has practised this method of examining patients very successfully for many years, and he states that when any organ labors under active disease, on pressure over that part of the spinal cord, whence the nerves originate that supply that organ, pain will dart into it, with a force or violence, proportioned to the intensity of the disease. We should be pleased, if some of our correspondents would institute a series of experiments on this subject, and communicate the results for publication. We cannot but regard the Treatise of Dr. Monell, however able in other respects, as deficient in not pointing out the state of the fluids in this disease, and showing what influence the retention of *lithic* and *lactic* acid in the blood may have in giving rise to it. If recent observations are well founded, the presence of these acids in the blood bears to this complaint the relation of cause and effect.

We have not space, however, either for a critical or analytical notice of this work, such as it deserves; all we can do is, to recommend it to our readers as one of the best monographs on the disease, that has yet appeared, and the perusal of which will well repay the reader.

Art. XIV.—*A Dictionary of Terms used in Medicine and the Collateral Sciences.* By Richard D. Hoblyn, A. M., Oxon. First Am. from the 2d London Edition. Revised, with numerous additions. By Isaac Hays, M.D., Editor of the American Journal of the Medical Sciences. Philadelphia: Lea & Blanchard, 1845.

This is a work that we can cheerfully recommend to all medical students, and to every physician who occasionally stumbles across words, with whose meaning he is not entirely familiar. It indeed fully comes up to what a dictionary of terms ought to be, full enough to express the entire signification of a word in all its bearings, and yet concise enough to have that definition remembered. Some dictionaries that aspire to the character of *multum in parvo*, are merely vocabularies of synonyms, in which you may seek in vain for a satisfactory explanation of the meaning of terms; while others are essays on every subject embraced within the wide domain of the medical and physical sciences. Mr. Hoblyn has hit upon the happy medium, and produced a work that must be highly esteemed by the medical profession. He not only gives a very accurate and full account of the meaning of every term employed in medicine, but also its etymology, which is very important in fixing the meaning in the mind. The editor has performed no sham work in bringing it out; but has done *bonâ fide*, what he has undertaken, as he indeed always does. He has, not only in name, but in truth, "revised and adapted it to the wants of the American practitioner," having added our native medicinal plants, officinal preparations, &c., and made the work conform to the Pharmacopœia of the United States. His additions are numerous, and display a knowledge of medical terms, highly creditable to his talents and industry.

Art. XV.—*The Principles and Practice of Obstetric Medicine and Surgery, in reference to the process of Parturition, illustrated by* 148 *Figures.* By Francis H. Ramsbotham, M.D., &c. A new Edition, from the enlarged and revised London Edition. Philadelphia: Lea & Blanchard, 1845.

This new and improved edition of a well known standard work on Midwifery, presents very high claims on the patronage of the profession. In the first American edition, it is well known, considerable portions of the original text were omitted, as wanting in practical interest; these are now supplied, and the entire work carefully reprinted from the original text. The plates have been drawn anew, and additional illustrations introduced from the last London edition. As a work illustrating parturition, we are disposed to place it first on the list of the numerous publications that have appeared on this subject; for there is none within our knowledge, that displays in so clear and forcible a manner every step in the process, and that too under all imaginable circumstances. To the student and young practitioner, it is indeed invaluable, and to all who practice the obstetric art, it supplies resources and expedients adequate to every exigency—we may hereafter give a more particular account of its contents; at present, we can only speak of its merits in general terms.

Art. XVI.—*An Elementary Treatise on Midwifery, or Principles of Tokology and Embryology.* By Alf. A. L. M. Velpeau, M. D., etc., translated from the French by Charles D. Meigs. M. D., etc. 3d Am. Edition, with notes and additions by William Harris, M. D., etc. Philadelphia: Lindsay & Blahiston, 1845. 8vo., pp. 600.

The well known character of this Treatise renders an extended notice of it from us entirely unnecessary. It has (the 2d ed.) for some time been out of print, and the frequent demands for it have induced the Publishers to issue the present edition. As an Elementary Treatise, this work of Velpeau has always enjoyed a very high reputation, and as a Text Book it has been adopted in a very large proportion of our Medical Colleges. The present Edition not only contains the valuable notes of Professor Meigs, but is enriched by others from the able pen of Dr. Harris. We bespeak for the work, the continued patronage of a profession that is ever ready to accord to merit its appropriate reward.

Art. XVII.—*Outlines of the Arteries, with Short Descriptions; Designed for the use of Medical Students.* By John Neill, A.M., M.D., Prosector in the University of Pennsylvania, &c. Philadelphia, Barrington & Haswell. 8vo., pp. 30.

This is a highly useful Manual for students, in acquiring a knowledge of the arteries of the human body; and it possesses one advantage over all other works of the kind, in having the names attached to the arterial trunks, so that their position and name strike the eye at the same time. The drawings are sufficiently accurate for the purpose for which they were prepared, though they claim to be nothing more than outlines of the objects represented; minute detail seems to have been sacrificed to clearness and simplicity of arrangement. The descriptions are condensed from works of standard authority, and the plates made to correspond. We recommend every student of medicine to purchase a copy of this work, as a labor-saving machine—admirably adapted to refresh the memory, with knowledge gained by lectures, dissections, and the reading of larger works.

Art. XVIII.—*The Domestic Management of the Sick Room necessary, in aid of Medical Treatment, for the Cure of Diseases.* By Anthony Todd Thomson., M.D. First American Edition, from the second London Edition. Edited with additions, by R. E. Griffith, M.D., &c. Philadelphia, Lea & Blanchard, 1845. 12mo., pp. 353.

This book belongs to that class, which we have always considered useful and necessary for families and individuals, as it supplies the very information needed in cases of sickness. One of the greatest obstacles physicians have to contend with, is the ignorance and obstinacy of nurses, and attendants on the sick. Nothing is more common than for the plainest directions to be mistaken, and even medicines set aside, at the suggestion of some old woman, whose inquisitiveness and troublesomeness are only equalled by her stupidity.

The people need enlightenment on the means of preventing disease, and those general hygienic measures, which are so efficient in the preservation of the health of individuals and communities. The domestic management of the sick room ought to constitute a necessary part of female education, for the loveliness of woman nowhere shines so conspicuously, as in the performance of those duties which relate to the sick. And yet no part of education is so much neglected as this. "Woman is fully qualified," says our author, "by nature with intellectual powers equal to fit her as a rational companion to man, and to become an able and a sound instructress to his children; and also with sufficient strength of mind to share with him all the ills and disappointments of a chequered life. But if, in her education, accomplishments form the chief object; and acquirements are cultivated which have no tendency to elevate her character, to the exclusion of the wholesome and solid cultivation of the mind; if her education qualify her rather for the light graces of the drawing-room, than for the matronly offices of the wife and the mother, these invaluable properties cannot be looked for, and an act of the greatest injustice is done to the best and the most interesting part of our species."

The work is as well calculated to aid the medical man, and especially young practitioners, as it is the general reader—and we hope it may have, as it well deserves, universal circulation.

Art. XIX.—*A Practical Treatise on Diseases of Children.* By James Stewart, M.D. 3d Edition, carefully revised and enlarged. New York : 8vo., pp. 544.

This standard work on Diseases of Children, pronounced by the *Medico-Chirurgical Review* as the ablest work on the subject ever written, continues to meet with a constant, and steadily increasing sale, and has just passed to a third edition. The work is a model of elegance and purity of style; and the views detailed are remarkably judicious and enlightened.

It is somewhat remarkable that a work on the same subject, executed after the same plan, and expressing on every subject the same views, which has been published in a sister city, since the appearance of Dr. Stewart's publication, makes no allusion to it whatever. If this be the result of ignorance it is highly culpable—if of design, still more so—we trust that the merits of the work are such that it may even yet be counted worthy of notice out of our own city.

Art. XX.—*The Elements of Morality including Polity.* By William Whewell, M.D., author of the History and the Philosophy of the Inductive Sciences. In 2 vols. 12mo., pp. 401–424.

Though it is our design to notice chiefly works relating to medicine and the collateral sciences, yet occasionally, we may, as in the present instance, feel called upon to go out of our customary track, and speak of others of a different character.

This work of Mr. Whewell, which exhibits the great principles of moral, political, and ecclesiastical science in a far more complete and methodical manner, than has ever yet been done, is the first of a new and attractive series of standard books, to be issued by the Harpers under the name of "*Harpers' New Miscellany*," the volumes of which will be beautifully printed, in duodecimo, on fine paper, and bound in *extra muslin gilt*, at 50 cents per volume. The design of this series is, of course, popular instruction in the various departments of human knowledge; as philosophy, history, travels, science, biography, &c. We have no doubt that the cheapness and excellence of this series of works will ensure to them an extensive sale.

Art. XXI.—*The Anatomy and Diseases of the Breast, with numerous Plates.* By Sir Astley Cooper, F.R.S., &c. To which are added his various surgical papers, now first published in a collected form. Philad. : Lea & Blanchard. Large 8vo. Pp. 130–188.

This completes the invaluable series of Sir Astley Cooper's writings, issued by the house of Lea & Blanchard, Phil., and in a style of art commensurate with the value of the works themselves. Beginning with the work on "*Hernia;*" the next in the series was on "*The Structure and Diseases of the Testis, and Thymus Gland;*" then followed that on "*Fractures and Dislocations of the Joints,*" and "*Lectures on Surgery, edited by Tyrrell,*" making five noble volumes in large octavo, and with the best illustrations of any medical publications ever issued in the United States. The plates, of course, are reduced from the original; but the figures will be found to be very faithful copies of the larger and more expensive originals.

Such a lavish expenditure of money on the part of the publisher, deserves, and will receive, the patronage of the entire profession.

Art. XXII.—*Elements of Materia Medica and Therapeutics.* By John P. Harrison, M.D., Prof. of Materia Medica and Therapeutics in the Medical College of Ohio. Vol. 1. Phil.: T. Cowperthwait & Co. Cincinnati: Desilver & Burr. 1845; 8vo., pp. 465.

We purpose noticing this very valuable work at considerable length, as soon as we receive the second volume. We do not hesitate, however, to characterize it as one of the most valuable, on the subjects of which it treats, of any hitherto published in our country—*utility* seems to have been the main object of its distinguished author, and he has fully succeeded in giving this character to the work.

It has higher claims to originality than most publications on the Materia Medica that have been recently issued; and although we differ in opinion, somewhat, from the writer, on the subject of the *modus operandi* of medicines, yet his views are ably sustained, and, perhaps, not easy of refutation. He acknowledges his indebtedness, among others, to Prof. Paine of New York, for the exposition of his views on this question; we shall anxiously look for the second volume, when we will take up the matter in detail.

Art. XXIII.—*Common Sense on Chronic Diseases, or a Rational Treatise on the Mechanical Cause and Cure of most of the chronic affections of the truncal organs, of both male and female systems, &c.* By E. P. Banning, M.D. Boston: 1844. 12mo., pp. 402.

This work, for which we are indebted to the kindness of the author, was received some time ago, and by accident got mislaid, or it would have received an earlier notice. The writer is a zealous and well educated physician, who has been led by long study, to adopt certain views in relation to the mechanical causes of disease, at variance with those usually entertained by the profession. We do not suppose that *therefore*, they are necessarily unsound, but we must confess that we have not been as yet convinced by the arguments adduced. Other minds, less sceptical than ours, may probably adopt them, and act upon them ; but, as yet, we do not see our way clear to do so. Our limits will not allow us to go into detail, but we shall try on a future occasion to give the work a more extended notice.

ART. XXIV.—*Republication of the Penny Magazine, Nos.* 1 *to* 12. Published by J. S. REDFIELD. New York.

No popular work has been recently issued in this country, which has stronger claims to the patronage of the public, than the Republication of the Penny Magazine. It is a vast magazine of information on all possible subjects, literary, historical, scientific, metaphysical, psychological, and moral—and perhaps no recent work has ever had a wider circulation. Since it is now placed within the reach of every one, with all the original plates and illustrations, at the low price of 25 cents per number, we should not be surprised to find its circulation here, even surpassing that which it obtained in Great Britain.

Foreign Medical Intelligence.

PART THIRD.

ANATOMY AND PHYSIOLOGY.

1. *Observations on the Structural Anatomy of the Veins.* By NORMAN CHEVERS, M.D.—The statements of different anatomical authorities with regard to the arrangement of the structures of veins, are singularly conflicting, and prove that, even up to the present time, the examinations of these tissues have been made in an exceedingly partial and altogether imperfect manner. It is very extraordinary that no writer appears to have recognized the remarkable and, indeed, entire difference in arrangement of structures which exists between the veins of the limbs and integuments, and those deeply seated within the great cavities and viscera of the body. To show the total absurdity which at present exists with regard to the real structure of these vessels, it may be as well to quote the statements of a few of our chief anatomical authorities upon the subject.

Meckel and Bichat described all the fibres of veins as longitudinal.* Quain considers that the greater number of the fibres of the proper tunic are longitudinal, some few only assuming a transverse direction.† Henlé describes the veins as made up of five tunics—1, a lining of epithelium ; 2, a striated or fenestrated coat of longitudinal fibres ; 3, a longitudinally fibrous coat, in the large veins formed of several strata ; 4, a layer occupying the place of the contractile circular-fibred coat of the arteries, but much thinner than it, and chiefly composed of fasciculi of cellular tissue, which, like that of the skin and dartos, may be regarded as contractile ; and 5, the external cellular coat, with longitudinal fasciculi.‡

M. Cruveilhier remarks, that "the existence of a middle coat in the veins is admitted by authors, some of whom say it is composed of longitudinal fibres, whilst others think it consists of circular fibres, but such fibres do not really exist" (this is probably stated on Meckel's authority). "Vesalius relates that, wishing to show them at one of his lectures, he was obliged to confess that he had never seen them, and could not find them." It is, however, added, in a note, that "nevertheless the veins have an intermediate set of fibres, constituting a thin middle coat." A description of the structure of these vessels, nearly corresponding with that of Henlé, is then given.

Müller affirms that circular fibres do not exist in the veins.§

Gerber describes the fibres of the proper tunic as arranged in long spirals.||

Willis has given a very minute description of the anatomy of a vein, dividing it into four tunics, the *first* (or outer) of which has longitudinal fibres, which he considered are possibly muscular; the *second*, vascular and glandular ; the *third*,

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* Meckel, Manuel d'Anatomie, t. i., p. 177.

† Anatomie, p. 81, 3d edition.

‡ British and Foreign Medical Review, No. xxvii., p. 285.

§ I do not find this remark in the second edition of Dr. Bayly's translation, where Schwann's description of the femoral vein of an ox appears to have been substituted.

|| Elements of General and Minute Anatomy, translated by Gulliver, p. 296.

an inner muscular coat, the fibres of which are circular; the *fourth*, and most internal, composed of fibres which are certainly muscular and annular in their course.*

Borellus, in 1664, first described circular fibres at the junction of the vena cava with the auricle.

Conflicting and contradictory as these opinions of various observers of high authority appear to be, none of them are really, in any important particular, at all irreconcileable with a true description of the structure of particular veins,—if we except the obviously incorrect statement of Müller, that no circular fibres exist in these vessels, and that of Gerber, which is obscure, and appears to be inaccurate. The fact has evidently been, that each of these anatomists must have satisfied himself by the examination of the tissues of a single vein or set of veins, and have given his description of the arrangement of the venous structures generally from the distribution of parts which he found in that particular specimen; so that it becomes a matter of absolute certainly that Meckel, Bichat, Quain, and Henlé, must have confined their examinations entirely to the superficial and external veins of the body, while Willis could only have dissected the deep veins of the trunk and viscera.

But I think I shall be able to prove that no greater error in anatomy cán be committed than that of concluding that the arrangement of tissues found in a portion of any one vein affords a type of the structure of the venous system generally; for this is demonstrably by no means the case. There are two classes of veins, which scarcely at all resemble each other in the disposition of their tissues; and there are also certain veins which present remarkable differences in the arrangement of their structures at different parts of their course.

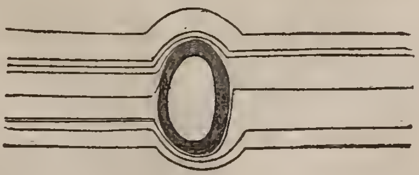
Very moderate care in dissection will be sufficient to convince any anatomist that the arrangement of the fibres in the principal veins of the interior of the body is altogether different from that which prevails in the venous branches of the extremities and superficial parts.

Having carefully investigated the minute structure of most of the principal veins, I submit the following as a fairly correct description of the arrangement of the tissues in those vessels.

The whole interior of the venous system is protected by an extremely fine membrane, nearly similar in structure to the lining of arteries, but of rather closer texture; it is also more firmly connected to the subjacent tissue.

Internal Veins.—The proper tunic of the principal internal veins, as, for example, the inferior cava, the pulmonary, azygos, and portal veins, and the coronary veins of the heart, is composed entirely of several (at least four or five) layers of strong fibrous tissue, the fibrils of which lie parallel to each other without any interlacement. These fibres are exceedingly strong and elastic, and have a fine pearly lustre. The manner in which this fibrous tissue is arranged at a spot where a tributary vein enters the main trunk, is very remarkable. In tracing a set of fibres along the interior of a large vein, to the point where a branch joins it, it will be usually found that they are not continued directly into the smaller vessel, but curve around its margin, some passing above it, others below, in such a manner as completely to encircle it (see fig. 1).

Fig. 1.



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* Willis, De Med. Operat., Part ii., Sec. 1, p. 137.

Did not this arrangement take place, it is evident that the fibres, which were transverse in the larger trunk, would, if prolonged into the branch, traverse it longitudinally; and this does occasionally occur:—I shall presently have to notice a few examples of secondary veins, which, although principally formed of circular fibres, have the tissue of their proper tunic arranged vertically where they join the main trunk. From the attached edge of the falciform process, which separates the common iliacs at the furcation of the inferior cava, a number of strong fibres pass upwards, in a rather oblique direction, upon the wall of the main vein; this is the only part of the proper tunic of the ascending cava where the fibres at all incline to take a vertical course; this arrangement is evidently intended for the support of the falx which separates the iliac vessels.

At the entrance of the *renal veins*, some of the fibres from the cava at first take a longitudinal course; but, after passing a little distance within the orifices, they curve round and become transverse. The remaining portions of the proper tunics of these veins are made up of circular fibres.

It will usually be found, in tracing the structure of the *spermatic veins* downwards, that to the distance of some inches below the points at which these vessels enter the cava and emulgent vein, the whole of their internal fibres take a longitudinal direction. To so great a distance does this arrangement sometimes extend, that anatomists might be led to believe, after dissecting only the upper portions of these vessels, that their fibrous tissue is arranged vertically throughout; but this is not the case, for, at a distance of from two to four inches below the orifices, some of the longitudinal fibres are found to curve at various angles, and to assume a transverse direction. This disposition becomes more general as we trace the structure downwards, until at length the whole of the proper tunic of each vessel is found to be composed of circular fibres; and this arrangement prevails throughout the remaining portion of their course.*

The superficial *veins of the organs of generation* (dorsalis penis, &c.) resemble the other veins of the integuments, being furnished with valves, and with an internal layer of vertical fibres.

The middle coat of the *pulmonary veins* is formed with circular fibres, precisely in a similar manner as the ascending cava, porta, and azygos, but its structure is rather more dense. At their entrance into the left auricle, the orifice of each of these vessels is surrounded, externally, with a complete ring of the muscular fibres of the auricle. It was in giving a description of these vessels that Willis demonstrated the circular arrangement of the fibres in the proper tunic of veins.

In the *superior cava*, at the point where it joins the auricle, the fibres take an oblique or vertical direction, but this arrangement does not usually extend far. The upper portions of the vessel and its branches are formed similarly to the inferior cava.

The *internal jugular* veins have a similar arrangement of middle tunic, the regularity of their circular fibres being broken only where they assist to form the curtains of the valves.

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* Each of the orifices of the spermatic veins is defended by a pair of small valves. The utility of these valves in preventing the occurrence of sudden and dangerous engorgements and hemorrhages in the parts from which the spermatic veins pass, must be very great. Were these slender and loosely-connected vessels perfectly open to the cava, not only would rupture of their coats and fatal effusion be liable to occur, whenever any of the frequent accidental causes of delay to the caval circulation threw an unusually large volume of blood into their canals, but various troublesome and dangerous congestions in the organs with which they communicate, uterine hemorrhages, and perhaps fatal interference with the process of gestation, would be continually likely to happen. But we find that, to whatever extent pulmonary and cardiac obstruction may advance, the internal organs of generation very rarely indeed participate in the effusions and other similar derangements which then interfere so much with the other abdominal organs: the catamenial function often preserves its accustomed regularity, and menorrhagia is not looked for as an attendant of the thoracic disease. The other veins from the organs of generation are defended by terminating below the iliac valves.

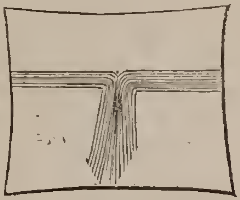
The *external jugulars* have their proper tunics less regularly arranged, but the prevailing direction of their fibres is transverse.

The structures of the *cerebral sinuses* (which are completely-formed veins) are rendered somewhat indistinct, and are very difficult to dissect, owing to the numerous processes of dura mater (*cordæ Willisii*) which everywhere make the canals of these vessels irregular;—it may, however, be clearly ascertained that the arrangement of the fibres of their proper tunic is similar to that of most of the other internal veins.

The external tunic of the cavæ and other large veins is furnished with a strong filamentary tissue, strengthened (in the main trunks) with bands of longitudinal fibres, which have been described as prolonged upon the superior cava from the fibrous pericardium, upon the inferior cava from the tendinous structure of the diaphragm, and along the portal branches from Glisson's capsule. The external tunic of all the other veins is formed, like that of the arteries, of filamentary and elastic tissue.

External Veins.—In tracing the structure of the middle tunic of the common iliac veins downwards, it is not unusual to find that, at a short distance below the forcation of the cava, some of the fibres begin to take a longitudinal course, being arranged in such a manner that a narrow tract of vertical lines extends along one part of the vessel, the remainder of the fibrous structure being disposed horizontally.

Fig. 2.



But this is not always the case, and it frequently happens that, down to the first set of valves, the structure of these veins (or at all events, of one of them), precisely resembles that of the cava. But, below the valves, the direction of the fibres begins to change; this takes place especially at the margins of the orifices of the secondary veins, where strong longitudinal fibres appear, and descend in expanded layers. Still pursuing the dissection downwards, it will be found that the circular arrangement of the more internal layers of fibres gradually disappears, and that the whole of the interior of the vessels becomes lined with vertical fibres. If a part of the femoral vein, at about the middle of its course, or of a superficial branch, such as the median of the arm, be examined, it will be found that its proper tunic consists of two distinct sets of layers, those internal being formed of longitudinal, those external consisting entirely of fasciculi of circular fibres. These two layers are perfectly separable and distinct from each other. My dissections of the parts have led me to believe, that this exterior layer of the proper tunic of the external veins is a continuation of the circularly arranged coat of the deep veins, somewhat altered by position and other circumstances, and that the vertical fibres are to be considered as a kind of superadded (or rather intra-added) structure, which is proper to veins of this class.

In most of the external veins the outer (circular) layer of the proper tunic is denser than the inner (vertical); this is particularly the case in the femoral vein and its principal branches, which derive their remarkable strength chiefly from the great development of the former tissue. It is doubtless owing to the thickness of this structure that hemorrhage from punctured wounds of the femoral vein usually proves so uncontrollable.

There is a very remarkable and beautiful fact connected with the structure of the *superficial epigastric veins.* The position of these little vessels places them among the number of the external veins, and yet, unlike any others of the vessels of this class (with the exception of the external jugular), their structure is precisely similar to that of the inferior cava, and the other internal veins. The design of this arrangement is obvious, for, in cases where the canal of the ascending cava becomes obstructed, we find these vessels, with the branches forming the azygos, taking upon themselves, in part, or wholly, the office of returning the blood from the lower half of the body; and thus, by a beautiful provision of nature, these apparently unimportant canals are rendered capable of taking on the functions of one of the largest vessels in the system. The *internal mammary veins* which communicate with the epigastric are similarly formed, and the *deep* epigastric veins have nearly the same arrangement of tissues.

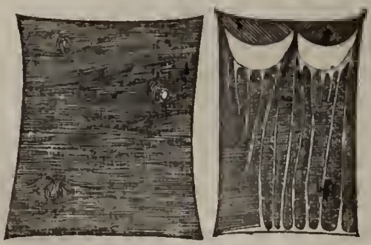
I observed this adaptation of parts with great interest; there is scarcely any other fact in anatomy that evidences so strongly as this does the comprehensiveness and forethought of the divine plan, in the construction of the human body.*

The epigastric veins are valveless. Under ordinary circumstances they empty their contents into the veins of the lower extremities; but, when obstruction to the caval circulation occurs, the absence of valves allows the direction of the current within them to be completely reversed. Observation of the direction of the flow of blood in the external epigastric veins, may doubtless be made an assistance to diagnosis in many cases of abdominal disease.

The above observations may be briefly summed up, by stating that the veins have three tunics:—the proper or middle tunic of the *deep veins* of the trunk is almost entirely composed of long parallel circular fibres, generally without any intermixture of longitudinal fasciculi (except at one or two points where a few filaments take a vertical direction). The exceptions to this rule are few. The middle tunic of the *external*, and with one or two exceptions, of the *superficial* veins, is formed within of a strong layer of fibres, the whole of which take a longitudinal course, in the intervals between each set of valves; and these fibres are immediately backed by a distinct layer of circular fasciculi which cross them at right angles, but without any interlacement. This outer layer forms distinctly a part of the proper tunic of the veins, and is perfectly separate from their external cellular investure.

It will be perceived how admirably both sets of vessels are adapted, by this arrangement of their tissues, at once to fulfil their peculiar functions, and to resist the injurious influences to which their several positions frequently expose them; the structure of the superficial veins, fitting them to undergo forcible and rapid distension and extension under sudden muscular efforts, and violent contortions of the limbs;—that of the deeper vessels enabling them to admit of far more considerable and protracted distension, during the frequent retardations to which the pulmonary circulation is liable, while the vessels of either class are so constructed as to have the power of regaining their natural dimensions, when the causes which produced their over-distension have ceased to operate.

Fig. 3.



The above figures represent the difference in structure between an external and an internal vein. In (*a*) the transversely fibrous structure of a portion of the splenic vein is shown; (*b*) exhibits the internal vertical, and the external circular arrangement of fibres in the proper tunic of one of the superficial veins of the arm. These figures correspond with preparations which the author placed some time ago in the museum of Guy's Hospital.—*London Medical Gazette.*

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* A considerable number of cases are upon record in which, the inferior cava having become obstructed, the return of the blood from the lower part of the body

2. *On the Coagulation of the Blood, and other Fibriniferous Liquids.* By ANDREW BUCHANAN, M.D., Professor of the Institutes of Medicine in the University of Glasgow.—DR. BUCHANAN showed some specimens of hydrocelic serum, the fibrin of which was coagulated by means of a few fragments of the *washed clot* of blood added to it some time before. The coagulated masses were transparent and tremulous, like calf-foot jelly, and so firm as to admit of being inverted on a plane surface without altering their shape. Dr. Buchanan made the following observations in explanation of the phenomenon.

The experiment exhibited to the Society, and the analogous experiments mentioned below, seem to me important, as serving to rectify some prevailing opinions as to the essential properties of fibrin, and the part which it plays in the coagulation of the blood, and certain other physiological processes. They are still farther interesting to me, as enabling me to correct some erroneous views of the constitution of the blood which I entertained, and which having been made public in the first volume of the "Proceedings of the Society," I feel it a duty to rectify.

The opinions commonly entertained by physiologists and chemists, to which allusion has just been made, are, that fibrin has a spontaneous tendency to coagulate: that this spontaneous coagulability is a characteristic property of fibrin, by which it is distinguished from albumen and casein: and that the coagulation of the blood, and of various other animal fluids, depends on the spontaneous coagulation of the fibrin which they contain. My experiments, on the other hand, show, that fibrin has not the least tendency to deposit itself spontaneously in the form of a coagulum; that, like albumen and casein, fibrin only coagulates under the influence of suitable reagents: and that the blood, and most other liquids of the body which appear to coagulate spontaneously, only do so, in consequence of their containing at once fibrin and substances capable of reacting upon it, and so occasioning coagulation.

The liquid of hydrocele, and other dropsical liquids, are generally regarded by physiologists as identical with, or at least closely analogous to the "*liquor sanguinis*," or liquid part of the blood; which they suppose to be effused, both in health and in disease, from the capillary blood vessels into the serous cavities and cellular interstices of the body. I have elsewhere shown (Med. Gazette, 1836), that of all these effused liquids that of hydrocele approaches most nearly in its qualities to the serum of healthy blood. In two cases in which the experiment was made, the specific gravity of hydrocelic serum and of the serum of blood drawn from the same individual on the same day, differed very little; and I have recently met with an instance of hydrocelic serum drawn from a very strong man having a specific gravity as high as 1·038, much higher therefore than the ordinary specific gravity of the serum of blood. I entertain no doubt, therefore, that the serum drawn off in cases of hydrocele, is, for the most part, identical with the liquid part of the blood. Such an opinion, however, can scarcely be held by those who believe the liquid part of the blood to be spontaneously coagulable; for, without controversy, the liquid of hydrocele possesses no such property, as I have ascertained by attentive observation in many hundred cases. If carefully drawn off, it may be kept until it putrefies without showing the slightest tendency to

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was effected by the collateral venous circulation: but I saw an instance of this kind at Guy's Hospital, about a year since, which was very remarkable from the circumstance that, although nearly the whole tract of the inferior cava of an adult had become completely impervious, and had evidently not transmitted any blood for several months, there had never been more than slight œdema of the patient's lower extremities; and at the time of his death there was not any. So freely had the blood returned by the vessels which unite in the azygos, and by the superficial epigastric veins, all of which were dilated to an extraordinary degree.

coagulate. If, again, as frequently happens, a little blood has been accidentally mingled with it, coagulation may ensue, not spontaneously, but from the re-action of certain elements of the blood upon the dissolved fibrin. This, if we leave out of sight the propensity to make facts bend to theory, is the only explanation that can be given of the assertion frequently made, but so inconsistent with observation, that the fluid of hydrocele is spontaneously coagulable.

What are the elements of the blood that have the power of causing fibrin to coagulate? The washed clot of the blood is the most efficient. It is, perhaps, indeed, the only element of the blood that has the property of coagulating fibrine. The washed clot is the substance which is usually, but very erroneously, named the *fibrin of the blood.* It is best obtained (Med. Gazette, 1836) by mixing one part of liquid blood with from six to ten of water, and stirring them carefully for five minutes, so as to prevent the blood from falling to the bottom and coagulating unmixed. After the mixture has stood from twelve to twenty-four hours, it is to be filtered through a coarse linen cloth, and the product washed with water. The mass thus obtained consists, chiefly, of the insoluble portion of the red corpuscles; next of the colorless granules and globules; and least in quantity of the precipitated fibrin, by which these main constituents of the coagulum are agglutinated together.

Let a small quantity of this substance be mixed with the liquid of hydrocele, reducing it to minute shreds, and diffusing it equably through the liquid. Coagulation will ensue in many cases as rapidly as in the liquid blood itself. The coagulum is often quite distinct in from five to ten minutes. It becomes gradually firmer, and in the course of a few hours admits of being passed without breaking from one vessel to another, and very much resembles the transparent tremulous substance of calf-foot jelly. The power which the washed clot has of coagulating fibrin is not less remarkable than that of rennet in coagulating milk, to which, indeed, it may be aptly compared. This experiment is well adapted to the lecture-room—the reagent being added to the liquid serum at the commencement of the lecture, and the coagulated mass shown at the end of it. A very complete illustration of the process by which the blood coagulates may be exhibited by adding to the liquid along with the reagent, some pounded charcoal, the particles of which being diffused through the liquid, and getting entangled in the meshes of the nascent fibrin, there is formed a black clot, which, on the addition of a little water, swims in it, just as the blood-coagulum does in the liquid serum.

The washed coagulum retains its coagulating power for a long period—even after its odor indicates the commencement of the process of putrefaction. In preserving it as a reagent, however, I think it advisable to add to it a small quantity of spirits, and to keep it in a stoppered phial. Thus kept, I have found it to retain for several months its power of coagulating fibrin. The serum of hydrocele is the more coagulable the fresher it is. It sometimes soon loses its coagulability on being kept, but more frequently retains it till putrefaction is far advanced. There is, therefore, no difficulty for any one repeating those experiments, and satisfying himself of their truth.

The experiment which I have described is very analogous to some experiments which I performed in the year 1831, and of which I afterwards published an account, in the London Medical Gazette (April 9, 1836). I then showed, that if the clot of blood reduced to the liquid state by kneading and expression through a linen cloth, be mixed with hydrocelic serum, the mixture recoagulates into a perfectly homogeneous solid mass, which, like the ordinary coagulum of blood, becomes florid on exposure to the air: and that if a portion of coagulum not so disintegrated be put into a vessel containing hydrocelic serum, a web of fibrin is gradually spun around the coagulum. I showed that these effects were not due to the coloring matter of the clot; but I did not try the effect of the washed clot, my attention having been called in a different direction, by finding that pure serum of blood and hydrocelic serum when mixed together underwent coagulation. On since discovering the efficacy of the washed clot in causing coagulation, I thought it probable that the minute solid particles, which the microscope never fails to detect in the serum of blood, were the agents to which the coagulation of the two kinds of serum when mixed together ought to be ascribed.

This corresponded well with the observation which I had long before made, that the deeper the red tint of the blood-serum employed in the experiment, the better does it succeed. On the other hand, Dr. Anderson, in his paper "On the state in which fibrin exists in the blood" (Proceedings of Glasgow Phil. Soc., vol. i., p. 201), has shown that if the mixed liquids be carefully filtered, so that no solid particles can any longer be detected by the microscope, coagulation nevertheless ensues; thus rendering it probable that the coagulating principle exists in the serum of blood not as a solid, but in a state of solution. It may, however, be objected to this experiment, that the blood-corpuscles pass through any filtering paper, however dense; and that it is impossible by filtration, to deprive turbid serum of the solid particles mechanically diffused through it.

In the summer of last year, after I had satisfied myself as to the power of the washed clot in causing coagulation, I tried the effect of the buffy coat of the blood, reduced to minute shreds, and diffused through the hydrocelic liquid, and found it, in numerous instances, to have a similar power. I even found, that the dried buffy coat from the blood of a horse, which I had kept for several months, on being pulverized and mixed with the liquid, induced coagulation. I found the effect of the colorless buffy coat to be much greater than that of the red clot. I also found the upper part of the red clot to have a stronger coagulating power than the lower part of it. These facts seemed to show that it was the colorless corpuscles of the blood in which the coagulant power was mainly seated. The colorless corpuscles rise to the surface on the blood being drawn, and, there exerting their coagulating power, render the upper part of the clot invariably much firmer than the lower part of it; and this is exactly what is seen in a more marked way, in inflamed blood, in which the colorless corpuscles are much more abundant, and rising by their levity to the surface, form a layer on the top of the red corpuscles; and thereafter, by their superior coagulating power, give rise to the firm crassamentum without redness which we name the buffy coat. As I knew the transparent coagulum, which we find on the surface of newly formed blisters, to consist chiefly of such colorless particles, I tried it as a coagulant, and found it to induce coagulation, although less powerfully than the washed clot of blood. The coagulum, formed artificially in hydrocelic serum by different reagents, seemed to have little coagulating power; as if the transparent granules of fibrin must not only be precipitated, but have acquired more or less of the organized vesicular shape which they have in the blood and in the blister-liquid, before they possess the power of coagulating. This power seemed, therefore, to be the result of organization, and analogous to the metabolic power which Schwann has ascribed to the elementary cellules. This view led me to think it probable, that all the tissues of the body might have a similar power of reacting upon the liquor sanguinis effused into their meshes, and thus contributing to their own development, by engendering there such vesicles as we meet with in the blister-liquid. My first trials made with the muscle and skin of beef well washed to free them of blood, did not succeed; but on trying the muscle of veal, I found it to produce coagulation. I afterwards recognized a similar coagulating power in the muscular substance of beef and veal, in white fish, skin, and cellular membrane: but the effect produced was less remarkable than that of the washed clot, and required a longer time, generally from one to three days. The tissue which answered best was the spinal marrow, probably in part from its great softness and diffusibility. On one occasion I found the spinal marrow of a bullock to cause coagulation in half an hour, the coagulum formed being very firm and beautiful. The substance of the brain seemed to have less power, although no rigorous comparison of them was made. Last of all, I found that the corpuscles of mucus from the Schneiderian membrane and throat possessed a coagulating power, though tardy: and that even the globules of purulent matter, which are just altered primary cellules, retained their coagulant power; for when put into hydrocelic serum, instead of continuing diffusible through the liquid, they agglutinated themselves together by the intermedium of fibrin, forming a white solid mass, such as we often see of smaller size on inflamed membranes.

These various experiments fully satisfied me that the tissues possess the property of coagulating fibrin: and I was farther disposed to think that this power was most energetic in the primary cells or vesicles; and less energetic as these cells passed into secondary forms, as in the red corpuscles of the blood, the pus globules, and the various tissues of the body. This corresponds well with the greater vigor of development in fœtal life and infancy, when the tissues have deviated little from their primary structure; and the gradual diminution of the activity of the function as life advances, and the tissues are more and more altered. The coagulation of the fibrin of the effused liquor sanguinis, under the influence of the primary cells and tissues, may probably, therefore, be regarded as the primary organizative act by which the assimilable matter dissolved in the nutritious liquid passes into the form of an organized solid.

It is scarcely necessary for me to add, that I am now satisfied, that the fibrin of the animal fluids exists in them in solution, previous to its appearing in a corpuscular form: and that the liquor sanguinis differs from the serum which separates from the blood-coagulum in this respect, that the former contains fibrin in solution, while the latter has been *defibrinized* by the action of the colorless blood-corpuscles upon it. I also think the theory of the production of cell-germs and cells by the reaction of the two kinds of serum upon each other, less probable than the theory of their formation stated above. The same theory may also be applied to explain the origin of the blood-corpuscles in the capillary lymphatics, and the production of the numerous less regular corpuscles which are formed in the capillary blood-vessels during inflammation, and which, after mingling with the circulating blood, rise to its surface when drawn, and reacting on the fibrin occasion the buffy coat of the blood. The opinion of Dr. Anderson in his paper already quoted, that the blister-liquid contains fibrin which is precipitated during coagulation, I believe to be correct in many cases, as I have sometimes found that liquid, when acted upon by the washed clot, to deposit fibrin: in other cases again, I have found, on applying the same test to the blister-liquid, that it contained little or no fibrin; and in such cases, I believe the coagulum which forms in it, to result from the simple aggregation of the organized corpuscles which it contains, as observation with the microscope first suggested to me.

[REMARKS.—We willingly give insertion to this interesting communication. The facts ascertained by Dr. Buchanan, with regard to the property of the clot, of cellular membrane, and other organic solids, in inducing the coagulation of fibrin in liquids containing it, are likely to throw great light upon the processes of nutrition and growth. We have thus a singular test for this principle in liquids which would hardly be expected to contain it, *e. g.*, the serum of hydrocele. In 1840, Dr. Buchanan read a paper before the British Association, describing a method of separating fibrin, in a perfectly soluble form, from blood, by mixing gradually one part of liquid blood just drawn from the vein, with six or eight parts of pure serum, obtained from blood drawn the day before. The coagulation was in this case much retarded, and the fibrin separated in a translucent mass. This ingenious experiment clearly proved that the fibrin was actually dissolved in the blood, and that it was not a constituent of the red particles. From the fact stated in his communication, it would appear that a serous fluid (that of hydrocele) may hold fibrin dissolved, and this principle will not separate by spontaneous coagulation. It requires what might be perhaps called a catalytic action on the part of the washed clot, analogous to the action of rennet on casein, to induce it. If the serum of hydrocele exercise a solvent action over fibrin, it would be interesting to know whether the serum of blood might not also retain a portion. It is in the meantime obvious from these results, that spontaneous coagulability is no longer a sure test for fibrin in organic liquids; and that the old division of the blood into coagulable and uncoagulable lymph comes nearer to the truth, than physiologists have been of late years inclined to admit.—*Ed. Lond. Med. Gaz.*

2.

American Intelligence and Editorial.

OPERATIONS ON THE LOWER JAW.

Letter from Prof. Mott to Dr. Liston, of London:—

New York, Sept. 30, 1845.

To Robert Liston, F.R.S., Prof., &c.

My dear Sir,—The great object in all our investigations ought to be truth. In no profession is it more important than in the healing art. Our noble profession, if exercised upon this basis, becomes an ornament and a blessing to our race.

From the distinguished position you are in, and the thousands who listen to your admirable lessons, and witness the skilful movements of your knife in surgical operations, your opinion of a point of practice, or the author of an operation, will be powerful and lasting.

You are in common with all men tenacious of your own rights, and I cheerfully believe will magnanimously award what is just and right to others. I appeal to you therefore as a professional friend, to weigh me in the balance of justice, and I shall have great pleasure in awaiting your decision.

I claim for myself and for my country *originality* in the operation of ex-section of the lower jaw at the temporo-maxillary articulation, and in different proportions for osteo-sarcoma. I avow and declare solemnly, that I never saw, read, or heard of anything of the kind ever having been done in any country. There are surgeons now living in this city who saw my first operation, and all of them will cheerfully testify to the truth of what I assert.

Far be it from me to presume to say that other surgeons may not have thought of the same expedient, and since executed the same operation without the least knowledge of what had been done by me ; of one thing, however, I am certain, that an eminent surgeon now in Paris, informed me that he took the printed sheets of my first case with him to Paris and told M. Dupuytren of them, he (Dupuytren) requested a translation to be made, stating, that in a few days he would give a clinique on that subject. The translation was made by my friend and handed to Dupuytren. He gave his lecture with my case in his hand, but made no allusion to it. My firm belief therefore is, that my operation for osteo-sarcoma was performed before those of this eminent surgeon.

Some two or three years after the publication of my first case, I read an account of several cases which were operated upon by my friend Dr. Cusack, of Dublin. Knowing as I do personally that distinguished surgeon, it never occurred to me to say anything in relation to this subject in all our intercourse in Dublin and Paris. From whom he derived the idea therefore, I know not ; it may also have been original with him. This, however, can only be answered by Dr. Cusack himself. As you have stated in your lectures published in the *Lancet*, that Dr. Cusack was the *first* to perform the operation of ex-section of the lower jaw for osteo-sarcoma, I have felt constrained to make to you the statement in justice to myself.

My first operation was performed on the 17th November, 1821, and is published at length with plates in the "New York Medical and Physical Journal," vol. i., p. 385.

Since that period I have performed the operation *seventeen times*. In three instances the bone was removed at the temporo-maxillary articulation. In one of the cases, the bone was sawed through at the first bicuspis tooth of the opposite side.*

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* See this case with plates in the Medical and Philosophical Register of New York. Others of my cases are distributed through the different periodicals of our country.

All surgeons of reading or observation must be aware that from time immemorial, either large portions or even the totality of the lower jaw have been removed or destroyed by violence, various accidents, and in later times by gunshot wounds, fire-arms, &c. It has also long been familiarly known that partial or total destruction of the lower jaw has been spontaneously produced by the morbid processes of caries, necrosis, &c. Thus nature herself, in these latter cases particularly, pointing out as it were to the surgeon, from the perfect restoration to health that has succeeded to such disasters, that he himself might venture to follow in her footsteps.

For the great historical details, we refer to Velpeau's Operative Surgery, vol. iii., Paris edition, 1839.

But lastly, we repeat and aver, that the ex-section of the lower jaw of even a fourth part, much less a half or two thirds of it, for any form of sarcoma involving the whole texture of the bone, has never in our opinion been performed by any surgeon, past or present, until by myself at the time above stated.

The *onus probandi* that my claims are unfounded rests with others. For my part, I know of no record in existence now, nor did I know of any at the time I performed the operation, as I have already said, which can in the slightest degree militate against my pretensions.

Even admitting that M. Dupuytren did ex-sect a portion of the lower jaw, prior to myself, it is conceded by Velpeau, who pronounces his operation altogether *new*, and a *great triumph* in surgery, that it was performed for cancer and not for osteo-sarcoma.

Indeed we find that so eminent an authority as M. Ribes (Dict. des Sciences Médicales, tome xxix., page 431, Paris edition), also positively asserts upon the testimony of M. Lisfranc, who assisted at and published an account of the above operation of M. Dupuytren in 1812, that it was a *cancerous degeneration* ; and to show furthermore that M. Ribes himself so considered it, he, in his preliminary observations on the lower jaw in the same work, speaks in the following *prophetic* language, in reference to the pleasing anticipation that this ex-section for cancer would ultimately pave the way for a similar operation for the cure of that hitherto intractable and fatal malady, osteo-sarcoma. His words are as follows: "These facts lead to the hope that fungus, or *osteo-sarcoma* of the lower jaw, a disease so formidable, that it has in many cases been vainly attacked with the iron and fire, will *henceforward since the operation performed by M. Dupuytren be removed by amputation* of a portion *more or less considerable of the lower jaw*, without the danger of any accident, and *if the disease is local, with a certainty of success.*"

We are also aware that M. Begin's (Dict. de Méd. et de Chir. Pratique, Paris, 1835, vol. xiv., p. 259) states that Dr. Fischer appears to be one among the first who has performed the ex-section of the inferior maxillary bone at the temporo-maxillary articulation. His operation dates in the year 1795, and furthermore, M. Begin remarks (ibid.) that he has been successively imitated by Mursinna, Graeffe, Mott, Dzondi, McClellan, Liston, Jaegar, Dupuytren, Walther de Bonn, and MM. Gensoul and Lisfranc.

So far as *the disarticulation* of this bone is concerned, M. Velpeau (the most accurate living authority in relation to the history of surgery) distinctly asserts that M. Palmi was the first individual who first disarticulated the lower jaw.

For ourselves we can assert, that without attempting to *imitate* any of our predecessors, the disarticulation of the lower jaw, where we have resorted to this, has been performed by us purely in reference to the exigencies of the case as presented while ex-secting this bone for osteo-sarcoma, and that we claim priority and originality both for the ex-section for osteo-sarcoma, as well as for the single curvilineal incision below the base of the jaw, by which the operation is accomplished.

With considerations of the highest respect,
Believe me to be, truly your friend,
VALENTINE MOTT.*

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* Dr. W. H. Deadrich of Athens, Tennessee, published in the sixth volume of the "American Medical Recorder" for 1823, an account of an operation by which he

NATIONAL MEDICAL CONVENTION.

We invite the attention of our readers to the following communications from two of the most enlightened members of the profession, who have deeply pondered the subject on which they write. We trust that their expectations may be realized, and that a convention, truly entitled to the appellation of *National*, may be ere long convened, to take into consideration the important subject of Medical Education, and other measures calculated to advance the interests, and sustain the respectability of the profession. It remains to be seen whether there is a sufficient *esprit du corps* among medical men in the different sections of the Union, to support such a project, and whether, indeed, a sufficient number can be got together, as to form a convention of the nature contemplated. That important benefits would, in all probability, flow from such a convention, we think in the highest degree probable, and we therefore hope that every Medical College, every State Medical Society in the United States, will be represented. We have always advocated a higher standard of medical attainment for graduating in medicine, and a sufficient preparatory education to place physicians on a par with the other learned professions; but we have seen so much of the levelling system; so much pandering to popularity; such audacious promises on the part of medical schools to gull pupils; such pretensions to cheapness in board; such mock examinations for degrees; such drumming up of students; and such underbidding in the price of tickets; in short such artifices and tricks, and manœuvres, for the sake of putting a few dollars into the pocket; that we have almost lost our early faith in the practicability of medical reform, at least to that extent, to which it ought to be carried, in order to accomplish the desired end.

In our opinion it belongs legitimately to the general government, to regulate the qualifications of those who undertake the practice of the Healing Art, in the United States, and we find the authority conferred in that clause of the constitution, which confers on it the power of "*providing for the general welfare*,"—for if the practice of medicine is not connected with the "general welfare," we know not what is. Indeed, the government has already taken this power into its own hands, in granting patents for certain modes of practice, as *Thompsonianism*, and a great variety of quack pills, mixtures, and other secret preparations; we now go for an extension of its jurisdiction, and thus providing some general scheme for the education and licensing of medical men, similar to what is now in contemplation by the Parliament of Great Britain. In no other way, in our judgment, can the desired reforms be brought about. In no other way can a uniform system be carried into operation throughout the entire Union. This will place us beyond the reach of demagogues in our State Legislatures, and will lead to such a reform in our contemptible patent laws, as will save the regularly educated physician from the mortification of seeing Thompsonian and other quacks, standing on the same platform with himself. Some may think, that as the people of our own State have recently decided through their legislators that they

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removed the lower jaw from the angle to the centre of the chin, for a large cartilaginous tumor, which occasioned great difficulty in swallowing and breathing. The patient was a lad fourteen years old, and the operation was performed in 1810. This boy had a speedy recovery. This was made public two years after the publication of my first operation.—V. M.

are more competent judges of medical skill, than they are of pork, fish, sole-leather, lumber, and tobacco, it would be better to wait till they have found out their mistake ; and that in the mean time, we should aim to raise the standard of learning and respectability among ourselves. We grant that if the profession would unite, as one man, in carrying out proper measures, there would be less necessity of invoking the aid of the State, or the General Government. But our misfortune, we fear, is, that having been turned loose by the State, we have not spirit (*esprit du corps*) enough to take care of ourselves, we must convince the people that if they consult their own best interests,—their own, and the lives and health of their friends, and in other words, the "general welfare," they must set about prescribing some mode of qualifying men to take upon them the weighty responsibilities of life and death ; and not show, by their indifference, less regard to these matters than they do to the possibility of being cheated out of a few dollars in purchasing the ordinary articles of commerce, of the value of which, it would be almost an impeachment of a man's common sense, to suppose him ignorant.

[Letter from Dr. L. Ticknor, President of the Connecticut State Medical Society.]

"SALISBURY, CONN., Oct. 3, 1845.

Dear Sir,—"The proposed National Medical Convention has for its object (as I understand it), the elevation of medical character, an approximation at least, to a common and elevated standard of qualifications for degrees, and a suppression or discouragement of quackery, so far as it may exist in the medical family. That quackery does exist among us in some of its objectionable and even contemptible forms, is evident, from its hateful and pernicious consequences, to every reflecting observer. Considering our extent of territory and the multitude of States into which the Union is divided, it is by no means strange that the medical schools in the several States should gradually yield to other motives, than a desire to promote the best interests of society, by a thoroughly educated and properly disciplined medical faculty. It is fairly enough implied, if not perfectly obvious, that there exists no small degree of rivalship among our medical institutions and leading medical men ; not, I fear, who shall furnish the most valuable and best-wrought article, but who shall furnish the greatest quantity. To furnish some antagonism to this tendency of our profession, which is from year to year gaining strength, influence and popularity, the writer knows of no one effort the medical profession can make that promises so much as to organize a National Medical Society, to meet annually, biennially or triennially, having, if you please, a vice-president and committee of correspondence in each State ; but it does not become me to anticipate details. A national society, however, may do much, I am satisfied—it may lay the foundation of something like nationality in our medical literature—it may also prove a medium through which the profession shall prevail with Congress to shed upon us the light of her countenance—at least, our government may be so far influenced as to refuse her patronage to the most gross and unprincipled quackery.

"When an attempt to come together on these subjects was first mentioned, it did not, I must confess, seem feasible ; but upon reflection the acknowledged philanthropy, public spirit and practical good sense of the medical profession generally, afford sufficient promise, that the effort will extend to some profitable result.

"Your fellow-servant,

"L. TICKNOR."

The New York State Medical Society and a National Medical Convention, &c.—At the last Annual Meeting of the New York State Medical Society, the following preamble and resolution were adopted with much unanimity, viz. :—

" *Whereas :* It is believed that a *National Convention* of Medical Men would be conducive to the *elevation* of the standard of Medical Education in the United States ; and

" *Whereas :* There is no mode of accomplishing so desirable an object, without concert of action on the part of the Medical Societies, Colleges, and Institutions of all the States. Therefore

" *Resolved :* That the New York State Medical Society earnestly recommend a *National Convention of Delegates* from Medical Societies and Colleges in the whole *Union*, to convene in the city of New York, on the *first Tuesday* in May, in the year 1846, for the purpose of adopting some *concerted action* on the subject set forth in the foregoing preamble." (See Transactions, page 148, for 1845.)

A committee of three were appointed to carry out the object of the resolution.

That the subject of education, both primary and medical, so far as it concerns the student of medicine, has engaged much of the attention of the profession in this State, the proceedings of the State and County medical societies plainly show. And that the present *practical* standard of attainments is quite too low, throughout the whole country, has long been acknowledged. Hence the efforts which are being made by the State society of New York, are not only imperiously called for, but are highly creditable to that learned body. There is also at the present time, a peculiar fitness in this proposition for a national medical convention ; to deliberate seriously, and fully, on the all important subject of medical education, and the future interests of the profession generally. For, aside from the general and well-known benefits derived from the free and frequent association of men pursuing the same calling in life ; aside from that generous and noble zeal which is always kindled into new activity when enlightened and ambitious minds meet ; there is throughout the entire profession, an identity of feeling, of education, of interest, which should make an occasional general association in the highest degree interesting and profitable. Besides, the profession in almost every State in the Union, is now left, so far as legal enactments are concerned, to take care of itself ; to make its own rules, and adopt its own standard of excellence. For if we cannot make rules or laws which will banish ignorance, stupidity, and empiricism, we can, at least, fix our *own* standard of qualification, and thereby say who *we* will recognize as *our* associates. But such is the freedom of intercourse between the States of our Union, and the frequency of migrations from one State to another, that we very much doubt whether more than two-thirds of those who enter the medical profession in any one State, actually practise in the same State where they received their education. Indeed, nearly if not quite one half of the young men who graduated at the four medical colleges in this State in the winter of 1844, were from other States. Hence every one will readily perceive the difficulty of effecting a real, adequate, and permanent elevation of the standard of medical attainments in one State, without the coöperation of the rest. It was to obviate this difficulty, by exciting a more general, harmonious, and decisive action throughout all the States, that gave birth to the proposition in the New York State Society, for a national convention. A proposition, in the magnitude and importance of its object, not only worthy of the society from which it emanates, but worthy also of a prompt response from the whole profession. We are assured that the committee to whom the subject has been entrusted, have been, and still are, actively engaged in the performance of their duties ; and that there is at present, a fair prospect for a *full* and *animated* convention. This being the case we hope it will not be deemed out of place, for us to write, and the medical press to publish, a few thoughts on the present condition and wants of the profession in relation to the education of its members, that the appropriate remedies may be the more clear and satisfactory. At present, there is no standard of primary qualifications for the student of medicine. It matters not whether he has any knowledge of the natural sciences or ancient languages, or even a competent knowledge of his mother tongue. All the young man has to do, is to gain admittance into the office of some physician, where he can have access to a series of ordinary medical text-books, and see a patient perhaps once a month, with perhaps a hasty post-mortem examination once a year ; and in the course of the three years thus spent, one or two courses of lectures in the medical colleges, where the whole science of medicine, including anatomy, physiology, chemistry, materia medica, pathology, practice of medicine, medical jurisprudence, surgery, and midwifery, are all crowded upon his mind in the short space of *sixteen* weeks (a time hardly sufficient to dissect carefully and minutely one subject) ; and his education, both primary and medical, is deemed complete. He is consequently honored with a parchment, and admitted into the ranks of the profession. Now, we ask in all seriousness, if such a system of education is capable of producing a body of learned, investigating, and reflecting men ; capable of scanning the vegetable, the animal, and the inanimate kingdoms ; of comprehending the physiology and pathology of man ; and of weighing at a glance, the thousand circumstances which surround the physician at every step of his intercourse with disease ? We unhesitatingly answer no. There may, indeed, be found here and there, a mind, so endowed by nature, that despite of all the contracting and evil influences of such a system, will rise superior to every obstacle, and shaking off one embarrassment after another, will roam over, and revel in, all the fields of science untrammelled and free. And it is such that constitute the ornament and honor of our profession.

But far otherwise is it with the great mass ; the ninety-nine out of every hundred. With no *practical* knowledge of chemistry and botany ; with but a smattering of anatomy and physiology, hastily caught during a sixteen weeks' attendance on the anatomical theatre of a medical college ; with still less of real pathology ; they enter the profession having mastered just enough of the details of practice to give them the requisite *self-assurance* for commanding the confidence of the public ; but without either an adequate fund of knowledge or that degree of mental discipline, and habits of patient study which will enable them ever to supply their defects. Hence they plod on through life, with a fixed routine of practice, consisting of calomel, antimony, opium, and the lancet, almost as empirically applied as is cayenne pepper, lobelia, and steam, by another class of men. And how can this ever be otherwise, while medical students, without regard to their previous qualifications, are shut up three years in the office of a country or village physician, sent out to one or two courses of lectures, and then honored with the title of M.D. ? And this too, while we all know that a practical knowledge of botany can only be gained in the fields and the forests ; of chemistry, in the laboratory ; of anatomy, in the dissecting-room with scalpel actually in hand, not for a week or two only, and even that during the same time that the mind is being crowded with from three to five lectures a day on almost as many different topics ; and of clinical medicine, at the bed-side of the patient, close at the elbow of his preceptor. Indeed so radical are the defects in our present system of medical education, and so glaring are their effects on the condition and usefulness of the profession, that no observing man will charge us with exaggeration in the foregoing statements. We had intended to extend this article much further, and to notice the propriety of establishing a permanent *National Medical Association*, during the sitting of the next May convention, but our time will not permit ; and we must therefore defer anything further until the next number of the Journal.

Binghampton, Sept. 22d. N. S. D.

We find the following remarks on this subject, and the resolution to which the above refers, in the October No. of the *Buffalo Med. and Surg. Journal :—*

National Medical Convention.—The New York State Medical Society at its last annual meeting, adopted the following preamble and resolution:

" *Whereas*, It is believed that a National Convention would be conducive to the elevation of the standard of Medical Education in the United States, and whereas, there is no mode of accomplishing so desirable an object, without concert of action on the part of the Medical Societies, Colleges, and Institutions of all the States, therefore,

"*Resolved*, That the New York State Medical Society earnestly recommend a National Convention of delegates from the Medical Societies and Colleges in the whole Union, to convene in the City of New York, on the first Tuesday in May, in the year 1846, for the purpose of adopting some concerted action on the subject set forth in the foregoing preamble."

Shall this plan of a convention be carried into effect ? This is for the profession in the different States of the Union to decide. We hope measures have been taken to bring the subject before the Societies and Schools of the several States, so as to insure seasonable action upon it. In the meantime, it is desirable that the matters which will come before a convention be discussed throughout the country by means of medical periodicals, and the various local associations, in order that the general sentiments of the profession may be elicited, and properly represented by the delegates. None can doubt the propriety, nay, the urgent necessity for the adoption of some means to elevate the standard of medical education, and advance the dignity and usefulness of the profession. There seems no other course but for the profession to endeavor, by its own action, to effect objects so desirable to itself, and still more important to the public. We fervently hope that this movement will meet with general concurrence, and cordial co-operation. Much may probably be done by Medical Journals towards awakening interest in the measure, and we trust this duty will not be omitted. We are gratified to see in the New Orleans Journal a warm approval of it. The Editors say, " we look upon this as one of the most important moves ever proposed, in regard to the profession in this country, and we sincerely hope the call will be responded to throughout the Union."

New York Medical Schools.—The prospects of the Medical Colleges were never better than at present. A greater number of Medical Students are in attendance than there ever was before. The unremitted exertions of the faculties to render instruction, given in this city, as perfect as it can be, by combining the practical part of education with the precepts given in the lecture room, have, undoubtedly, brought about this result. The two weekly Cliniques are invaluable to the Students, while the Hospitals and Dispensaries add their thousands for practical instruction. It would scarcely be credited, were not the fact authenticated by official reports, that in one year alone, in the three Dispensaries, upwards of 50,000 patients were treated, which, added to other institutions where the sick receive gratuitous medical advice and attendance, make a probable aggregate of not less than 70,000 patients accessible to Medical Students.

Private teaching also has received a new impulse, and if Students depart from the city destitute of the qualifications necessary to encounter the numerous physical ills of humanity, the fault must be theirs alone.

"*Geneva Medical College.*—The fall term of this institution commenced on Tuesday of this week. A very large class of Medical Students, numbering some two hundred, we understand, are already in attendance. This institution has secured a Faculty which, for its learning, medical and surgical skill, is unsurpassed by any similar institution in the country, and certainly possesses advantages, in many respects, inferior to none in the State. We are gratified to see it in so flourishing a condition, and with such flattering prospects before it."—*Geneva Gazette.*

"*Medical Schools.*—The season is now at hand when the medical student is to decide at what institution he will seek instruction for the coming winter. As it is customary for Medical Institutions to advertise their advantages, terms, &c., through medical and other journals, and by means of circulars which are extensively distributed, students are enabled readily to obtain what general information they require, before determining to which to give their preference. As regards the relative merits of different schools, we have not data sufficient to qualify us to speak; nor have we any disposition to make invidious distinctions in order to influence the minds of those students and preceptors who may do us the honor to read our remarks. We accord to all the merit of being honestly desirous of fulfilling their obligations to the pupil and the profession, and we sincerely believe that the majority of those who are invested with the responsibilities of teaching the various departments of medical science, are competent to the duties involved. That there are evils and abuses in some of our medical schools which require correction, all who have bestowed any observation and reflections on the subject, must admit. Of these, in our capacity of journalists, we shall not hesitate to speak as occasions offer, without intending, at any time, to apply our remarks to any particular institution.

"Medical schools have increased in number, of late years, so that there can hardly be said, at the present time, to be any deficiency. We do not, however, regard the fact that they are numerous, as necessarily leading to bad consequences. So far as an honorable spirit of emulation is developed and promoted by competition, it may be expected that the means of education will improve, rather than diminish, in proportion to the number of schools. But if, instead of this commendable spirit, they vie with each other in offering to the pupil unworthy inducements, and in resorting to intriguing, dishonorable methods to increase the number of their students, their influence upon medical education and the profession, is of the most pernicious character. If it be tacitly understood, for example, that, at certain schools, the acquirements of the pupil are but slightly scrutinized in admitting him to graduation, the public, the profession, and the pupil himself, alike, receive a severe injury, in so far as this consideration exerts its intended influence. It is needless to say that this course is reprehensible in the extreme. So, also, deception in any form, underbidding in price, and any of the various methods of electioneering and puffing, obviously tend to degrade the profession, and institutions known to adopt such means of advancing their interests, should be scouted by all who have the honor and usefulness of the profession at heart. We trust and believe that it would not be an easy matter to cite many, if any instances, in which these enormities are practised. There is, however, one custom more or less prevalent, which, although we would not include it in the same category, in a moral point of view, is (as it seems to us) hardly less injurious in its consequences. We allude to the custom of receiving students at medical schools upon credit. Many of our schools offer this inducement, to a greater or less extent. This custom, in various ways, exerts a detrimental influence. It does injustice to the teacher, since it is not to be supposed that he can afford to bestow his time and labor in this, more than in other departments of effort, without an adequate compensation; and hence, it follows as a legitimate result, that institutions who adopt this custom are unable to command the same ability in their teachers as those who pursue a different system. All the facilities of instruction, also, dependent on the pecuniary resources of the institution (and the fees from pupils generally constitute the chief resources of medical schools), will be impaired by a system, the effect of which is, that a large portion of the class receive instruction gratuitously. No institution can pursue this course and do proper justice to its pupils, and to the cause of medical education. It involves a practical discrimination which is an imposition upon those who do not ask for credit, and, in reality, obliges them to support the school for the benefit of those who contribute nothing towards it.

"Its tendency is to cheapen the value of a medical education in public estimation, since it is an universal habit to estimate the real worth of anything by what it costs. But, more than all, it exerts a direct influence to lower the standard of medical attainment, and depreciate the honor and usefulness of the profession, by operating like a bounty for young men to engage in the study of medicine who are in no wise qualified, either by preliminary education, habits of application, or elevated views. It is due to this evil, in a great measure, that so many enter the profession, whose connection with it results in disappointment and mortification to themselves, and is a reproach to the profession.

"If, then, we were to advise the medical student, about to attend lectures, we should say, go prepared to pay the fees required, and give preference to an institution where this is expected of all. Let physicians, generally, give this advice to their pupils, and the evil of which we have spoken will be speedily corrected.

"There are other matters connected with the subject of medical schools upon which we have some remarks to offer; but these we must defer for a future number. The subject is one of great importance, and we mean to discuss it freely and independently.

"In the preceding remarks, we have considered *credit* as equivalent to a gratuitous attendance upon lectures. That it is so, is, of course, not true, in a rigid sense, since a proportion of those who obtain credit ultimately fulfil their obligations to pay. If, however, we have been correctly informed by those acquainted with the practical working of the system, this proportion is not large. For those who are able to give satisfactory security for payment, the system is quite superfluous, since these persons ought to be able to obtain the facilities they require, from the circle of their immediate friends, or from those whose business is to lend money upon satisfactory security. They ought not to ask their teachers to sustain toward them the additional relation of bankers; nor would they, if the system did not exist. But, being customary, they conclude they may as well avail themselves of it. Institutions, hence, deprive themselves of much of the immediate avails of teaching which they might otherwise have, and in this way inflict upon themselves a pecuniary injury. We would sympathize, as fully as any, with the situation of the pupil earnestly desirous of entering the profession, but repelled by impoverished means; yet, regarding the condition of the profession as affected by removing this obstacle in all cases, it would be far better for the pupil himself to submit to the necessary exertion, deprivations, and delay, than for the present state of things to continue, although it may seem to contribute to his immediate advantage."—*Buffalo Med. Jour.*

Medical Ethics.—Mr. Percival has the following judicious remarks on this subject:—

"The *Esprit du corps* is a principle of action founded in human nature, and when duly regulated, is both rational and laudable. Every man who enters into a fraternity engages, by a tacit compact, not only to submit to the laws, but to promote the honor and interest of the association, so far as they are consistent with morality, and the general good of mankind. A physician, therefore, should cautiously guard against whatever may injure the general respectability of his profession; and should avoid all contumelious representations of the faculty at large, or of individuals; all general charges against their selfishness or improbity; and the indulgence of an affected jocularity or scepticism concerning the efficacy and utility of the healing art.

"As diversity of opinion and opposition of interest may, in the medical, as in other professions, sometimes occasion controversy, and even contention; whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or of surgeons; or to the two orders collectively, if belonging both to medicine and surgery. But neither the subject matter of such references, nor the adjudication, should be communicated to the public; as they may be personally injurious to the individuals concerned, and can hardly fail to hurt the general credit of the faculty."

Whether the following description from an old pamphlet has any counterpart at the present time, we shall leave entirely to the judgment of our readers:—

"I will give you a true character, whereby you may plainly know and discern a mountebank-like cheating physician. He is of an insinuating disposition, and very submissive; he basely croucheth, not only to such as keep houses of receipt, and their servants, but also most disgracefully to the hostlers and tapsters, chamberlains, &c., and for this only end, to be commended by them to strangers, and extolled for the best physician in the city. By these commendoes, he gets patients; by his arrogant boastings, and vain promises of cure, large fees in the beginning, and by his clinical and unnecessary observances a repute of his great care, fees daily, for this is that money which he hunts after. You may also discern him by his looking up and down, now here, now there, crouching unto one, insinuating with another, bragging and vainly boasting of his own worth and skill, as though Æsculapius were only installed in his dishonest pate; and by common report you hear of the numerous patients that he hath, and the good fees that he receiveth; telling you of wonders that he hath done—BUT ALL LIES."

Ligature of the left Subclavian Artery within the Scaleni Muscles.—This formidable operation was performed at the New York Hospital on the 15th inst., by Dr. J. Kearney Rogers, for aneurism of the subclavian in the third stage. Our next number will contain the details of this important case, illustrated with a plate, by the distinguished operator.

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Suicide or Murder?—Case of Sophia Smith.—The death of this young female, in August last, in Chambers street in this city, caused much excitement at the time, in consequence of the peculiar circumstances under which the body was found. The verdict of the Coroner's Jury having failed in giving satisfaction, a second inquest was held, but with the same result—a finding of *suicide*. The following statements and reasonings upon the case from the pen of Dr. A. Calkins, of New York, are not without interest. We copy from the Tribune, of June 10th:—

"The condition of the corpse, as derived from official and other responsible sources, was as follows:—The body lay supine and extended upon a piece of carpeting, nude, relaxed and unconstrained; the lower extremities in apposition; the left arm in approximation to the side, and the right at an acute angle with the body. The right hand retained with a feeble (not grasping) closure a penknife, the handle of which was exterior to the thumb, and between its cheek and the fingers, with the point looking outward. The throat was encircled by three or four coils of a broad band cut from the chemise and fixed by a knot in front, though the pressure this made was but moderately firm. The mouth (not the fauces) was stuffed, but not closely, with a narrower strip of the same material to the length of a yard or more, and circumscribing the chin was a folded handkerchief fastened over the vertex. The features of the face were undistorted and composed.

The post-mortem examination detected neither any poisonous material in the stomach, nor any abnormal condition of any other organ, a local taint alone excepted.

I proceed to comment upon these facts, *seriatim* first, associatedly after.

The testimony that Sophia had inquired the day before whether in the event of her death Mrs. H. would provide for a decent burial, is improbable in a double aspect. The determined *felo de se* gives out no pre-intimations that might anticipate her design; and, besides, such inquiry should in all prudence have suggested preventive precautions.

The body was naked. And need I ask any mere man of the world, and least of all any woman in high or low degree, whether a female, even the most degraded among the courtesans of the pavé, could be hunted out, who could thus make a deliberate exposure of her person! Memorable instances to the contrary are on record, even in the annals of the bloody "Reign of Terror," when virtue was a reproach, and modesty a crime.

The features were composed, and the body lay in easy relaxation. And this after a death succeeding upon the convulsive throes of a heaving chest, and the contortions of quivering limbs! Jack Ketch would give the story a very different version.

No advantage could accrue from making several turns around the neck, other than the more easy maintenance of any compression already gained. The coiling must have been accomplished while the body was elevated, whether the knot was tied then or after. But the band was not tight; and I am bold to say it could not have been drawn to the requisite tension by the person herself, with all her resoluteness. It is far from easy (I speak advisedly), even by direct pressure, sustained for some minutes with the thumb over the larynx, so to constringe the tube as to obstruct respiration altogether; much more so when such constriction is in a degree neutralized by the elastic tissues circumjacent. A notable instance in point is that of the two criminals recently executed in a neighboring State by the drop, with all the advantage of a noose-cord and the momentum acquired from the weight of the body and a fall of some twelve inches. These persons did not cease to breathe, one short of eleven, the other under seventeen minutes. Could any female, with no impediment in the way supposed, effect an amount of traction equivalent to this? Even the practised mutes in the service of his Highness of Constantinople trust not to their brawny arms, but rather to the unrelaxing and unfailing bowstring.

The cramming of the mouth in such way could accomplish nothing, unless the throat were plugged also. As to the handkerchief, however tense, it could not absolutely confine the lower jaw, nor to any purpose if otherwise, for so long as the nasal passages were clear breathing would continue.

The knife, for any real service, could scarcely have been held in a more awkward manner. As for the stabs, they were merely skin-punctures.

I will now consider these points in their aggregate. Whichever was first in order, the ligation of the neck or the plugging of the mouth, it matters not, for either act, if effectual, would have precluded the execution of the other. But here comes in a consideration fatal to the whole supposition. It is very well known that the torture from obstructed respiration (as is obvious in a violent paroxysm of asthma) is of all sufferings the most excruciating—to the overcoming of all self-command in the instinctive efforts toward relief; an agony which no man, the most undaunted, the most obstinately bent on self-destruction, can endure for two minutes even. Therefore it is, the condemned criminal cannot, though at his own desire, be trusted with his arms unpinioned, thence the common resort of the suicide to the dagger, the knife, the poisoned bowl, the inextricable cord, or the flood. The hand must do its office at a stroke, or it falters. To presume suicide, then, is to pre-suppose a deliberation and a perseverance compatible only with a physical impossibility, just as if sensation had been extinguished, while reason survived. The handkerchief was adjusted smooth and unwrinkled, as it would have appeared if applied after death. The hands, it were to be expected, would have been found either holding upon the ligature, or as if forcing the plugging. But no; one is extended by the side, the other lies sloping off and inclosing a knife—as if the patient could have gone to work deliberately to stab herself amid the horrid torments of strangulation! Even if the stabs were self-inflicted, made beforehand, they would have been deeper; after, only on the supposition of exhausted strength, when the hand would have remained over the wounds, and the knife would likely have dropped to the floor.

On the supposition of homicide, wherefore such a variety of appliances? Inexperience always acts clumsily; art adroitly and with simplicity. Tact is not to be looked for in the raw recruit as in the veteran campaigner, in the barber phlebotomist as in the dexterous surgeon. The girl may not unlikely have stripped herself on going to bed (for the night was sultry and oppressive), in which state she might easily, if asleep, have been suffocated by some mysterious hand, and afterwards laid out on the floor, the neck bandaged, the mouth plugged, the handkerchief adjusted, the fingers inflected so as just to hold a knife in position after half a dozen punctures had been made, and so abandoned, in the dead of night, "when deep sleep falleth upon men." A suicide in such wise would make a novel section in the annals of medical jurisprudence.

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Phlegmasia Dolens in a Child.—We recently attended a case of this disease in a girl thirteen years of age, of a very full and plethoric habit. It came on with a slight efflorescence over the body, resembling scarlatina, on the disappearance of which a pain was felt in the foot and calf of the right leg, which gradually enlarged to an enormous size, becoming glossy, extremely tender to the touch; in short, presenting all the characteristics of *milk-leg*. In the course of three or four weeks, notwithstanding a pretty active course of treatment, extensive suppuration took place, and the matter was discharged by an abscess lancet. From one to two pints of sero-purulent matter, mixed with flakes of lymph, were discharged at one time. On making more superficial punctures over the leg and foot, limpid serum flowed out in large quantities. At one time two or three table-spoonsful of *oil*, evidently caused by a breaking down the tissues, were discharged from one of the openings. The periosteum and bone became also involved, and necrosis commenced mortification; and sloughing attacked the top and side of the foot, forming deep excavations, and the patient sank from exhaustion, twelve weeks from the time of attack. The leg was swollen during the first three or four weeks, to nearly double the natural size. The patient was sustained during the latter part of the disease, with the most nourishing kinds of animal food, quinine, opiates, &c.; a watery preparation of the Calisaya bark, from the shop of Mr. Milhau, in Broadway, was found to be a most excellent cordial, tonic and stomachic. The case was frequently seen by Dr. J. W. Francis, who pronounced it an unequivocal case of *phlegmasia dolens*. The patient had never menstruated.

Mode of arresting Hemorrhage by Compressed Sponge.—It has recently been stated by a Surgeon of this city that the use of compressed Sponge in arresting hemorrhage is, in his belief, *original* with Dr. Mott—that no surgical author has alluded to or described this method. This statement is altogether erroneous, for the same plan is described by Charles White in his "Cases in Surgery," published in 1770, and by Robert White in his "Practical Treatise on Surgery," published in 1796.

The former published a treatise on the use of Sponge; and, in his subsequent work, among other cases, he mentions one of aneurism of the leg, occasioned by a fracture, in which amputation had been proposed, but the hemorrhage was successfully arrested by the Sponge.

Robert White, in his treatise, p. 73, speaking of hemorrhage from a wounded artery, thus describes the method of using compressed Sponge: "A piece of dried compressed Sponge, cut in size and shape suitable to the wound or incision, with thread tied to it, by which it is to be drawn away in proper time, is thrust down to the bottom of the wound, and fixed, with the end of the finger, on the bleeding mouth of the artery; then compress after compress are fixed one above another, until the uppermost rises above the level of the wound; a strict bandage and pressure with the hand complete the whole of this obligatory process." From these excerpts it will be seen that the method of suppressing hemorrhage by means of compressed Sponge was known some seventy or eighty years ago. V.

[Though opposed to the practice of inserting anonymous articles in the Journal, we give place to the above, as the statements there made are known to us to be correct. In addition, we may add that in John Bell's "Operative Surgery," will be found, under the chapter which treats of the "*Means of arresting Hemorrhage*," a particular account of the mode of using the *dry compressed Sponge* in such cases, viz: cutting it into small pieces, and crowding with the finger down upon the mouth of the bleeding vessel, or to the bottom of the wound, placing other pieces above them, and over all a firm bandage. This is called by Bell *The Graduated Compress.* It is due to the distinguished Surgeon alluded to, to add that he has never authorized any person to claim for him this mode of checking hemorrhage as original; for while the present number of our Journal contains palpable evidence of his determination not to yield to others what clearly belongs to himself, he is no less willing and anxious to concede to others those inventions, discoveries and operations, to which they have as clear and undoubted claims.—Ed. New York Jour. Med.]

Dr. Edward Hacken.—We regret to learn, by a late English Journal, of the death of this talented and ardent young physician, by Phthisis Pulmonalis. We recently noticed his work on the "Curability of Pulmonary Consumption" by the internal use of *Naptha:* a disease under which he was probably laboring at the time he wrote the work. It is but recently we received a letter from him, in which he makes no mention of his illness. "Such shadows we are, and such shadows we pursue."

Death of Professor Richardson of Transylvania University.—Dr. Richardson, who has for the last quarter of a century filled the chair of Obstetrics and the Diseases of Women and Children in the Medical department of Transylvania University, died at Lexington, Ky., in September last. At a meeting of the Medical Faculty, held at the University September 15, 1845, resolutions were adopted of condolence with the relatives of the deceased, and expressive of high regard for his memory. The following notice we copy from the Lexington Observer & Reporter, of September 20th, in relation to filling the vacant chair:

To the Medical Public.—The chair of Obstetrics and the Diseases of Women and Children in the Medical Department of Transylvania University, is at present vacant; and with a view to fill it in the best possible manner, applications for the place are invited from the members of the Medical profession. Communications on the subject must be forwarded to the Dean of the Medical Faculty prior to the 30th day of January next, when the appointment will be made. It will be required, in conformity with a resolution of the Board of Trustees, that the person selected shall make Lexington his permanent residence.

The name of no one but the successful candidate will be made public.

M. C. JOHNSON, Ch'm. B. T. T. U.

Lexington, Sept. 20, 1845.

The vacant Chair of Obstetrics.—The above notice refers to a *permanent* appointment. The duties of the chair, for the coming session, will be performed by the Professor of Materia Medica and Therapeutics (Dr. Mitchell).

Idiosyncrasy.—Professor Lee: In listening to your lecture to-day, especially that part of it upon *Idiosyncrasy*, I was reminded of some cases of, to me, a peculiar character—the first of which occurred in one of the first years of my practice. I had occasion to bleed a woman about 40 years of age, and after having drawn a very few ounces, and while the blood was still flowing from the vein, she was taken with very severe pain all over the external parts of the system, and extending to the remotest extremities. It was an anomaly to me at that time, and I was unable to account for it. I suffered the blood to flow, however, but the pain increased instead of diminishing, as I then expected it would after a short time, and I removed the ligature from the arm, and by using frictions on the surface and extremities, the pain gradually subsided.

Several years afterwards I met with exactly the same symptoms on bleeding a young man in case of an ardent fever, but having thought much of the first case above mentioned, I had come to the conclusion, in my own mind, that the pain depended on the *spasmodic contraction* of the small vessels of the surface and extremities as they became emptied of their blood. I, in this case, immediately administered a free dose of some diffusible stimulus (I think of ammonia), and the pain subsided very soon, so that I was able to take as much blood as I wished. I have had occasion to bleed this last patient several times in inflammatory affections since that, and I have always found that he would suffer in the same way, unless I first gave him some strong diffusible stimulus in a free dose; and that has, at all times, prevented the recurrence of that unpleasant symptom. I have likened the pathological condition in this case to that of the after pains following child-birth. Am I right in this?

Respectfully, yours, &c.,

Geneva, 14th Oct., 1845. J. S. PAIGE.

[We publish the above, as every fact on the subject of Idiosyncrasy is valuable, and we have never met with the phenomena mentioned. The writer is a physician of large experience and great respectability, whose statements may be relied on. We lately have had occasion to bleed a patient, who was thrown into violent convulsions upon the loss of a few ounces of blood, although an individual of plethoric habit and great muscular strength. On inquiry, we learned that the same effect has invariably followed the operation of v. s., in his case.—Ed.

Ranking's Abstract.—A late number of the Provincial Medical & Surgical Journal has the following remarks in relation to this work, just issued by the Langleys:—

"In Dr. Ranking's 'Abstract' there is more of Science, more method and arrangement of the materials than in Braithwaite's Retrospect, and its value is greatly enhanced by the admirable series of Reports, with which it concludes. It affords a view of the progress of the Science, as well as of the Art; and, while not deficient in practical information, has claims also on the attention of the scientific physician and surgeon, and the cultivator of medicine in all its branches."

Diet in Cholera Infantum.—It will be recollected by the readers of our Journal, that Dr. James Stewart, in an article published in a preceding number, defended the superiority of animal jellies over farinaceous articles of food, in the treatment of Cholera Infantum. We have for some time past been in the habit of allowing young children chicken tea, mutton and oyster broth, and salt fat pork and ham, in this disease, and with the very best effects. During the past summer, we have employed isinglass and calf's-foot jelly, and in many instances, the complaint has been immediately arrested without the administration of a particle of medicine. Farinaceous food, as arrowroot, tapioca, sago, and rice, passes through the bowels in an undigested state, in this disease, and proves a source of irritation, which necessarily aggravates the complaint. Animal jellies soothe the irritable mucous membrane, and are far more readily assimilated than vegetable nutriment. We notice the matter here because we notice that writers on this disease, as Dr. Anderson, of St. Louis (St. Louis Medical and Surgical Journal, Sept., 1845), still recommend an exclusive vegetable diet in its treatment.

—

Electricity in Narcotic Poisoning.—We see it stated in the Connecticut Hartford Courant, that a Mr. Fowler of Mansfield was recently found in the morning apparently dead in bed, from the effects of a large dose (℥ ij) of laudanum, taken over night, and that after the usual remedies were applied without effect, electricity was resorted to. At the first application of the conducting wire to the chest of the patient, he rose, but fell back again. A few more applications sufficed to revive him, when he took some refreshment, and in an hour afterwards was apparently as well as before he took the dose.

We recently were called to an infant six months old, to whom an over dose of laudanum had been accidentally given six hours previously. The usual means had been faithfully employed by a physician who had been in attendance ever since the occurrence of the accident, but without effect. The child was cold, livid, completely comatose; the pupils contracted to the size of a pin's head, a frothy mucus filled the mouth and throat, and the respirations were not over four in a minute. The child was considered actually moribund. Galvano-magnetism was immediately brought to bear upon the little patient by means of Sherwood's rotary apparatus, one button being applied over the cervical vertebræ, and the other passed gently over the heart and lungs.

The cardial pulsations were immediately increased in force and frequency; lividity of the surface was exchanged for a florid hue; and the respiration was gradually restored to its natural state. In ten minutes after the application of the electricity, the circulation, respiration, and calorification were, to all appearance, the same as in health; the pupil gradually dilated, and the little patient was apparently out of danger. On withdrawing the stimulus, however, respiration in a few minutes evidently flagged, and the other functions became embarrassed *pari passu.* A single application of the positive button over the ensiform cartilage, the negative being kept to the spine, would cause a deep inspiration, which would be followed by natural breathing for some minutes, when the process had to be repeated.

In this manner, life was easily sustained for more than *six hours*, and no apprehension was felt that the child would not recover, when suddenly the machine ceased to operate, and could not be made to work for half an hour, during which time the patient ceased to breathe. It was found on examination afterwards, that one of the springs, which kept up the communication between the positive and negative poles, had given way, and thus interrupted the operation of the machine. Had it not been for the occurrence of this accident, there is no doubt but that the case would have terminated successfully. Dr. Marsh, of 520 Hudson street, to whom the above statement has been read, and who was present during the whole time of the treatment, cheerfully concurs in the correctness of the facts here detailed.—(*Ed.*)

Appendix to Dr. Post's article on Neuralgia.—Mr. Editor,—I received the following letter too late to be incorporated with the paper which I sent you on Facial Neuralgia. Will you have the kindness to publish it as an appendix? Alfred C. Post.

New York, October 10, 1845.

Dear Doctor:

I promised, when I met you at Dr. Crane's, the dentist's, to give you a statement of my own case of *Neuralgia Facialis;* and, after having waited some three weeks, that I might know whether I was effectually relieved by the operation I then submitted to, I proceed to fulfil my promise.

About the latter part of the month of March last—after having felt, every afternoon and evening for a week or two previous, slight nervous pains in the neck, about the ear and angle of the lower jaw—I was suddenly attacked in the street with a very severe and, to me, rather strange pain in the inferior maxillary bone, extending from an inch behind the angle to the symphysis, and which I supposed was caused by a decayed molar tooth in the lower jaw and on that side, and into which creosote, oil of cloves, &c., were put, but without affording me the least relief, but which I afterwards found in the use of the aconite. In a month or so afterward I had the suspected tooth filled, without experiencing any difficulty therefrom.

Early in June following I was afflicted with an insidious sub-acute pleuritis, which terminated by effusion into the right side of the chest, for the cure of which I placed myself under the care of our esteemed friend Dr. Swett. The enervating effects of remedies and confinement to my room reduced me considerably in both flesh and strength, and with the return of health came also the nervous pains in my face, which now appeared to radiate from the affected molar tooth, and extend themselves over the right side of the head and face. I suffered a paroxysm of pain almost every night of three or four hours' duration, and frequently one in the daytime, and from which the aconite had no power to relieve me; neither was any one of the many remedies for such cases that I resorted to of more than doubtful utility. One morning, after having suffered incessantly for eighteen hours, I had the molar tooth, which I supposed might possibly be the cause of my trouble, extracted, but without the slightest alleviation of the pain, when I resorted to the free use of asafœtida and valerian, and became easy in about six hours afterwards. I should have stated before, that during the severest of these paroxysms of pain, as well as those which followed, I was so extremely nervous that my breathing became most painfully rapid, with a coldness, and a semi-paralytic condition of the extremities of one, and sometimes both sides, together with the secretion of an almost incredible quantity of limpid urine. This state of things continued after the extraction of the tooth, without anything like periodicity about it, for two weeks or more, when I thought a decayed *dens sapientiæ* of the lower jaw on that side might, notwithstanding every appearance and sensation to the contrary, be the cause of the pain; and, in the midst of a paroxysm, I had it extracted, with an immediate and entire relief from all my long-continued pain and suffering, and which, now three weeks afterwards, I have not felt in the least degree.

Respectfully yours,

Dr. A. C. Post. O. White, 50 Lispenard street.

Death of Dr. Robert Graham, of Edinburgh.—It is with deep regret that we are called upon to record the death of this distinguished Professor of Botany in the University of Edinburgh. It is to his indefatigable exertions that the Medical School and citizens of Edinburgh are indebted for the magnificent Botanical Gardens which are such an ornament to that city. Dr. G. died at Coldoch, in Perthshire, on the 7th of Aug., deeply regretted by a large circle of friends and the profession generally.

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